As confidentially submitted to the Securities and Exchange Commission on February 1, 2019

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

EXAGEN INC.
(Exact name of registrant as specified in its charter)

Delaware	8071	20-0434866
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

1261 Liberty Way, Suite C
Vista, California 92081
(760) 560-1501
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Fortunato Ron Rocca
President and Chief Executive Officer
Exagen Inc.
1261 Liberty Way, Suite C
Vista, California 92081
(760) 560-1501
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Cheston J. Larson Matthew T. Bush Jeffrey T. Woodley Latham & Watkins LLP 12670 High Bluff Drive San Diego, California 92130 (858) 523-5400	Charles S. Kim Sean Clayton Kristin VanderPas Cooley LLP 4401 Eastgate Mall San Diego, California 92121 (858) 550-6000

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☒
Emerging growth company	☒		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Proposed Maximum Aggregate Offering Price[(1)]	Amount of Registration Fee[(2)]
Common Stock, $0.001 par value per share	$	$

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price. Includes shares of common stock that the underwriters have the option to purchase.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

Pursuant to the applicable provisions of the Fixing America's Surface Transportation Act, we are omitting our audited financial statements for the year ended December 31, 2016 and our unaudited financial statements as of and for each of the nine months ended September 30, 2017 and 2018 because they relate to historical periods that we believe will not be required to be included in the prospectus at the time of the contemplated offering. We intend to amend this registration statement to include all financial information required by Regulation S-X at the date of such amendment before distributing a preliminary prospectus to investors.

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS (Subject to Completion) **, 2019**

Shares

Common Stock

This is an initial public offering of common stock by Exagen Inc. We are offering shares of our common stock. The initial public offering price is expected to be between $ and $ per share.

Prior to this offering, there has been no public market for our common stock. We intend to apply to list our common stock on the Nasdaq Global Market under the symbol "XGN."

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012, and, as such, have elected to comply with certain reduced public company reporting requirements.

	Per share	*Total*
Initial public offering price	**$**	**$**
Underwriting discounts and commissions(1)	**$**	**$**
Proceeds to Exagen, before expenses	**$**	**$**

(1) See "Underwriting" for a description of the compensation payable to the underwriters.

We have granted the underwriters an option for a period of 30 days to purchase up to additional shares of common stock.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 11.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of common stock to purchasers on , 2019.

Joint Book-running Managers

Cowen **Cantor** **William Blair**

, 2019

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Neither we nor the underwriters have authorized anyone to provide you with information other than that contained in this prospectus or any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are offering to sell, and seeking offers to buy, common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus or any free writing prospectus is accurate only as of its date, regardless of its time of delivery or of any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

Through and including , 2019 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

For investors outside of the United States: We have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the section in this prospectus entitled "Risk Factors" and our audited financial statements and the related notes thereto included elsewhere in this prospectus, before making an investment decision. As used in this prospectus, unless the context otherwise requires, references to "we," "us," "our," "our company" and "Exagen" refer to Exagen Inc.

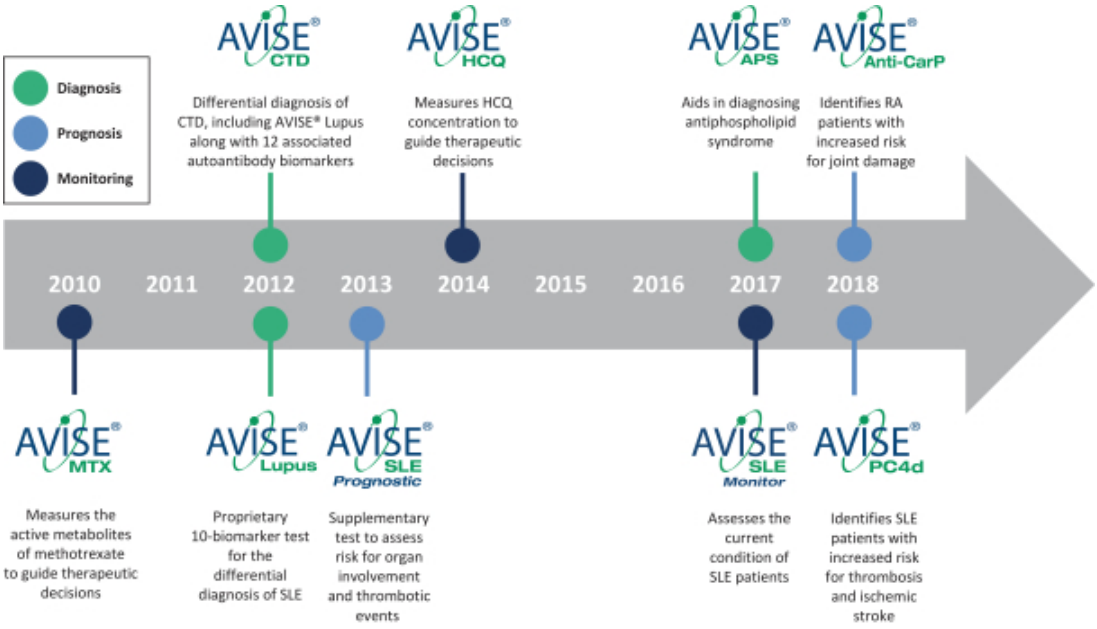
Company Overview

We are dedicated to transforming the care continuum for patients suffering from debilitating and chronic autoimmune diseases by enabling timely differential diagnosis and optimizing therapeutic intervention. We have developed and are commercializing a portfolio of innovative testing products under our AVISE® brand, several of which are based on our proprietary Cell-Bound Complement Activation Products, or CB-CAPs, technology. CB-CAPs assess the activation of the complement system, a biological pathway that is widely implicated across many autoimmune and autoimmune-related diseases, including systemic lupus erythematosus, or SLE. Our goal is to enable rheumatologists to improve care for patients through the differential diagnosis, prognosis and monitoring of complex autoimmune and autoimmune-related diseases, including SLE and rheumatoid arthritis, or RA. Our strategy includes leveraging our portfolio of testing products to market therapeutics through our sales channel and targeting the approximately 5,000 rheumatologists across the United States. Our business model of integrating testing products and therapeutics positions us to offer targeted solutions to rheumatologists and, ultimately, better serve patients.

We currently market nine testing products under our AVISE® brand, which we are leveraging to establish partnerships with leading pharmaceutical companies. In December 2018, we entered into a co-promotion agreement with Janssen Biotech, Inc., or the Janssen agreement, to exclusively promote SIMPONI® (golimumab), a subcutaneous, once-per-month, anti-tumor necrosis factor, or anti-TNF, biologic prescribed in combination with methotrexate, in the United States for the treatment of adult patients with moderate to severe RA and for other indicated rheumatic diseases. We began direct promotion of SIMPONI® in January 2019 and are in the process of expanding our salesforce from 31 representatives as of December 31, 2018 to up to 60 representatives by the end of the first quarter of 2019 to support these promotion efforts. Combined U.S. sales of SIMPONI® and SIMPONI ARIA®, an intravenous formulation, were approximately $1 billion in 2018. We believe our strategy of integrating the promotion of testing products and therapeutics, combined with our specialized salesforce, uniquely positions us to expand SIMPONI®'s U.S. market share.

Our lead testing product, AVISE® CTD, enables differential diagnosis for patients presenting with symptoms indicative of a wide variety of connective tissue diseases, or CTDs, and other related diseases with overlapping symptoms. The comprehensive nature of AVISE® CTD allows for the testing of a number of relevant biomarkers in one convenient blood draw, as opposed to testing serially for individual biomarkers, which adds time and cost to the diagnostic process. We believe AVISE® CTD may provide clinical utility for over 23 million patients in the United States suffering from these diseases, which include SLE, RA, Sjögren's syndrome, antiphospholipid syndrome, or APS, other autoimmune-related diseases such as autoimmune thyroid, and other disorders that mimic these diseases, such as fibromyalgia. There is an unmet need for rheumatologists to add clarity in their CTD clinical evaluations, and we believe there is a significant opportunity for our tests that enable the differential diagnosis of these diseases, particularly for potentially life-threatening diseases such as

SLE. Our commitment to addressing this need is demonstrated by our strong track record of developing innovative testing products, as illustrated below:



AVISE® CTD leverages our proprietary CB-CAPs technology to differentially diagnose SLE. AVISE® CTD provides rheumatologists and their patients with sensitive and specific results that allow for potentially faster and more accurate differential diagnosis of SLE as compared to other currently-marketed testing methods. Beyond SLE, AVISE® CTD allows rheumatologists to accurately diagnose other overlapping autoimmune and autoimmune-related diseases, including RA, with the same blood sample.

Our AVISE® SLE Monitor testing product also leverages our proprietary CB-CAPs technology by measuring two CB-CAPs biomarkers that offer insight into a patient's disease activity. This test is designed to enable rheumatologists to effectively assess and optimize therapeutic intervention in patients diagnosed with SLE. Depending on disease severity, AVISE® SLE Monitor may be utilized by patients multiple times a year throughout their lives.

Our RA-focused testing products include AVISE® MTX and AVISE® Anti-CarP. AVISE® MTX is a drug monitoring test designed to aid in the optimization of methotrexate therapy, the standard of care and first-line therapy for patients with RA. AVISE® MTX is based on our proprietary methotrexate polyglutamate, or MTXPG, technology that measures blood levels of MTXPGs, the active metabolite of methotrexate linked to disease control in RA patients. Measuring MTXPGs allows rheumatologists to identify patients presenting with inadequate exposure to methotrexate, enabling them to optimize dosing and achieve therapeutic levels commensurate with adequate disease control. AVISE® Anti-CarP, which measures anti-carbamylated protein antibody, or anti-CarP, was developed by the Leiden University Medical Center and we recently introduced it as a biomarker-driven RA prognostic test through a distribution agreement with Inova Diagnostics, Inc. with the goal of identifying patients prone to more severe disease.

We market our AVISE® testing products using our specialized salesforce. Since the launch of AVISE® CTD in 2012, we have performed over 280,000 of these tests, representing a compound annual growth rate of 87% through December 31, 2018, with limited incremental investment in our commercial infrastructure. Over 83,000 AVISE® CTD tests were performed in 2018, representing 18% growth over 2017, and the number of ordering physicians in the fourth quarter of 2018 reached 1,298, representing 18% growth over the same period in 2017. In the fourth quarter of 2018, we achieved a record number of 512 adopting physicians, which we classify as those who had previously prescribed at least 11 tests in a quarter, compared to 401 in the same period in 2017. Nearly 100% of adopting physicians continue to order tests in subsequent quarters.

In addition, we continue to populate a growing proprietary database of over 280,000 de-identified patient test results. We believe the insight emerging from these results has the potential to unlock value for pharmaceutical and biotechnology companies in the commercialization of therapeutics. We believe we also have the ability to further leverage our database to optimize patient selection in clinical trials for companies developing therapeutics for autoimmune and autoimmune-related diseases. We plan to collaborate with our existing and future pharmaceutical and biotechnology partners to help maximize the full value of our in-house database.

We believe our strategy of integrating the promotion of testing products and therapeutics differentiates us from other diagnostic and pharmaceutical companies, and provides our specialized salesforce greater access to rheumatologists. Unlike many diagnostic salesforces that are trained only to understand the comparative benefits of their tests, the specialized backgrounds of our salesforce coupled with our comprehensive training enables our sales representatives to interpret results from our de-identified test reports and provide unique insights in a highly tailored discussion with rheumatologists. Our integrated testing and therapeutics strategy results in a unique opportunity to promote targeted therapies in patient focused sales calls with rheumatologists, including those with whom we have a longstanding relationship and who have a history using our portfolio of testing products.

We recently entered into the Janssen agreement for the promotion of SIMPONI® in order to advance our integrated testing and therapeutics strategy. To support the co-promotion of SIMPONI®, we are in the process of expanding our salesforce from 31 representatives as of December 31, 2018 to up to 60 representatives by the end of the first quarter of 2019. This will enable us to conduct approximately 66,000 calls annually to rheumatologists, which we believe will enable us to achieve the optimal reach and frequency with rheumatologists. We also have agreements with other leading pharmaceutical companies, including GlaxoSmithKline LLC, or GSK, and Horizon Pharma USA, Inc., or Horizon Pharma, that leverage our testing products and the data generated from such tests. We provide GSK, a leader in lupus therapeutics, our test result data to provide market insight into and help increase awareness of the benefits of an early and accurate diagnosis of SLE. Our agreement with Horizon Pharma entails utilizing our AVISE® MTX test to report on levels of MTXPG in patients undergoing methotrexate therapy in combination with its anti-gout product KRYSTEXXA® in an ongoing Phase 4 clinical trial. We plan to pursue additional partnerships with a focus on integrating therapeutics that are synergistic with our evolving portfolio of testing products.

We are led by an experienced management team with unique capabilities to execute on our strategy of integrating the promotion of testing products and therapeutics. Our senior management has an average of over 20 years of experience in the healthcare industry and many were previously involved with successfully building Prometheus Laboratories Inc., or Prometheus, which was focused on integrating diagnostics and therapeutics, prior to its acquisition by Nestlé Health Science S.A. in 2011.

Our Strategy

We develop and commercialize next-generation testing products and promote synergistic therapeutics to ultimately improve the care continuum for patients suffering from debilitating and chronic autoimmune diseases. The key tenets of our business strategy include:

- Drive additional market penetration for our testing products.
- Integrate the promotion of testing products and therapeutics for autoimmune and autoimmune-related diseases.
- Continue our track record of developing innovative testing products.
- Establish additional therapeutic partnerships.
- Achieve meaningful margin expansion.

Risks Related to Our Business

Our ability to execute our business strategy is subject to numerous risks, as more fully described in the section entitled “Risk Factors” immediately following this prospectus summary. These risks include, among others:

- We have a history of losses, we expect to incur net losses in the future and we may not be able to generate sufficient revenue to achieve and maintain profitability.
- In the near-term, we expect that our financial results will depend primarily on sales of our testing products, and we will need to generate sufficient revenue from these testing products to grow our business.
- Our future growth depends, in part, on our ability to execute on our strategy of integrating the promotion of our existing and future proprietary testing products with the promotion of therapeutics, and we may be unsuccessful in our promotion efforts for SIMPONI®, which could adversely affect our ability to implement this strategy.
- We may be unable to manage our ongoing and future growth effectively, which could make it difficult to execute our business strategy.
- If we lose or are unable to secure partners for our integrated testing and therapeutics strategy, or if our partners do not apply adequate resources to their relationships with us or are unable to provide, on a timely basis, an adequate and reliable supply of the therapeutics that we promote, our potential for profitability may be adversely affected.
- Our commercial success depends upon attaining and maintaining significant market acceptance of our testing products and promoted therapeutics among rheumatologists, patients, third-party payers and others in the medical community.
- We rely on sole suppliers for some of the reagents, equipment and other materials used in our testing products, and we may not be able to find replacements or transition to alternative suppliers.
- If we are unable to support demand for our current testing products or any of our future testing products or solutions, our business could suffer.
- If third-party payers do not provide coverage and adequate reimbursement for our testing products, or they breach, rescind or modify their contracts or reimbursement policies or delay payments for our testing products or promoted therapeutics, or if we or our partners are unable to successfully negotiate payer contracts, our commercial success could be compromised.
- Developing new testing products involves a lengthy and complex process, and we may not be able to commercialize on a timely basis, or at all, other testing products we are developing.

- We conduct business in a heavily regulated industry, and any changes in regulations or the U.S. Food and Drug Administration's, or FDA, enforcement discretion, or violations of regulations by us, could adversely affect our business, prospects, results of operations or financial condition.
- If we are unable to maintain intellectual property protection or if we infringe the intellectual property of others, our competitive position could be harmed.

Corporate Information

We were incorporated under the laws of the state of New Mexico in 2002, under the name Exagen Corporation. In 2003, we changed our state of incorporation from New Mexico to Delaware by merging with and into Exagen Diagnostics, Inc., pursuant to which we changed our name to Exagen Diagnostics, Inc. In January 2019, we changed our name to Exagen Inc. Our principal executive offices are located at 1261 Liberty Way, Suite C, Vista, California 92081. Our telephone number is (760) 560-1501. Our website address is www.exagen.com. The information contained in, or accessible through, our website does not constitute part of this prospectus.

We use our trademarks in this prospectus as well as trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, certain trademarks and tradenames referred to in this prospectus appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trademarks and tradenames.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

As a company with less than $1.07 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, enacted in April 2012. An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements and only two years of related Management's Discussion and Analysis of Financial Condition and Results of Operations in this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions until the last day of our fiscal year following the fifth anniversary of the date of the first sale of our common equity securities pursuant to an effective registration statement under the Securities Act of 1933, as amended, or the Securities Act, which such fifth anniversary will occur in 2024. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer" as defined in Rule 12b-2 under the Securities Exchange Act of 1934, or the Exchange Act, our annual gross revenues exceed $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have elected to avail ourselves of this exemption and, therefore, we may not be subject to the same implementation timing for new or revised accounting standards as other public companies that are not emerging growth companies, which may make comparison of our financials to those of other public companies more difficult.

We are also a “smaller reporting company” as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than $100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

The Offering

Common stock offered by us	shares.
Option to purchase additional shares	We have granted the underwriters an option exercisable for a period of 30 days after the date of this prospectus to purchase up to additional shares of our common stock.
Common stock to be outstanding after this offering	shares (or shares if the underwriters exercise their option to purchase additional shares of our common stock in full).
Use of proceeds	We intend to use the net proceeds from this offering for working capital purposes and other general corporate purposes, including for selling and marketing activities, research and development activities and capital expenditures. See “Use of Proceeds” for a more complete description of the intended use of proceeds from this offering.
Risk factors	You should read the “Risk Factors” section of this prospectus and the other information in this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
Proposed Nasdaq Global Market symbol	“XGN”

The number of shares of our common stock to be outstanding after this offering is based on shares of our common stock outstanding as of December 31, 2018, after giving effect to the automatic conversion of all outstanding shares of our redeemable convertible preferred stock into 1,043,474,958 shares of our common stock (including the conversion of 88,030,905 shares of our Series G redeemable convertible preferred stock issued in January 2019) and the issuance of shares of our common stock as a result of the expected net exercise of certain outstanding warrants we issued in 2013 that have an exercise price of $0.01 per share, or the 2013 Warrants, in connection with the completion of this offering, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, which 2013 Warrants will terminate if not exercised prior to the completion of this offering, and excludes:

- 121,423,047 shares of our common stock issuable upon the exercise of stock options outstanding as of December 31, 2018, with a weighted-average exercise price of $0.007 per share;
- shares of our common stock issuable upon the exercise of outstanding warrants (which number does not include the 2013 Warrants) as of December 31, 2018, with a weighted-average exercise price of $ per share;
- shares of our common stock reserved for future issuance under our 2019 Incentive Award Plan, or the 2019 Plan, which will become effective on the day prior to the public trading date of our common stock (which number does not include any potential evergreen increases pursuant to the terms of the 2019 Plan); and

- shares of our common stock reserved for future issuance under our 2019 Employee Stock Purchase Plan, or ESPP, which will become effective on the day prior to the public trading date of our common stock (which number does not include any potential evergreen increases pursuant to the terms of the ESPP).

Unless otherwise indicated, this prospectus reflects and assumes the following:

- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the completion of this offering;
- the issuance of 88,030,905 shares of our Series G redeemable convertible preferred stock in January 2019;
- the automatic conversion of all outstanding shares of our redeemable convertible preferred stock into 1,043,474,958 shares of our common stock (including the conversion of 88,030,905 shares of our Series G redeemable convertible preferred stock issued in January 2019), which will occur in connection with the completion of this offering;
- the termination of warrants to purchase shares of our common stock outstanding as of December 31, 2018, with exercise prices expected to be higher than the assumed initial public offering price of this offering and which will terminate if not exercised prior to the completion of this offering;
- the adjustment of outstanding warrants to purchase 19,230,769 shares of our Series F redeemable convertible preferred stock into warrants to purchase 19,230,769 shares of our common stock, which will occur in connection with the completion of this offering;
- no exercise of the outstanding options and warrants described above, other than the 2013 Warrants;
- a one-for- reverse stock split of our common stock to be effected prior to the completion of this offering; and
- no exercise by the underwriters of their option to purchase additional shares of our common stock.

Summary Financial Data

The following tables set forth a summary of our historical financial data as of, and for the periods ended on, the dates indicated. We have derived the summary statements of operations data for the years ended December 31, 2017 and 2018 and the balance sheet data as of December 31, 2018 from our audited financial statements included elsewhere in this prospectus. You should read this data together with our audited financial statements and the related notes included elsewhere in this prospectus and the sections of this prospectus entitled "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." Our historical results for any prior period are not indicative of our future results.

	Year Ended December 31,	
	2017	2018
	(in thousands, except share and per share data)	
Statements of Operations Data:		
Revenue	$ 26,807	$
Operating expenses:		
Costs of revenue (excluding amortization of purchased technology)	14,137	
Selling, general and administrative expenses	18,820	
Research and development expenses	1,551	
Amortization of intangible assets	186	
Change in fair value of acquisition-related liabilities	(51)	
Total operating expenses	34,643	
Loss from operations	(7,836)	
Interest expense	(2,948)	
Loss on extinguishment of share purchase rights and 2013 Term Loan	(6,050)	
Change in fair value of financial instruments	(9,391)	
Other income, net	45	
Loss before income taxes	(26,180)	
Income tax benefit	549	
Net loss	(25,631)	
Accretion of redeemable convertible preferred stock	(5,353)	
Deemed dividend recorded in connection with financing transactions	(1,790)	
Net loss attributable to common stockholders	$ (32,774)	$
Net loss per share attributable to common stockholders, basic and diluted[1]	$ (2.83)	$
Weighted-average number of shares used to compute net loss per share attributable to common stockholders, basic and diluted[1]	11,577,921	
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)[1]		$
Pro forma weighted-average number of shares used to compute pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)[1]		

(1) See Note 2 to our audited financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the historical net loss and the historical and pro forma net loss per share attributable to common stockholders, basic and diluted, and the number of shares used in the computation of these per share amounts.

	As of December 31, 2018		
	Actual	Pro Forma[1][3]	Pro Forma As Adjusted[2][3]
	(in thousands)		
Balance Sheet Data:			
Cash and cash equivalents	$	$	$
Working capital[4]			
Total assets			
Borrowings, non-current portion, net of discounts and debt issuance costs			
Redeemable convertible preferred stock warrant liabilities			
Capital lease obligations, long-term			
Redeemable convertible preferred stock			
Total stockholders' equity (deficit)			

(1) The pro forma balance sheet data gives effect to:

- the receipt of $ in net proceeds from the sale of 88,030,905 shares of our Series G redeemable convertible preferred stock in January 2019;
- the automatic conversion of all outstanding shares of our redeemable convertible preferred stock into an aggregate of 1,043,474,958 shares of our common stock (including the conversion of 88,030,905 shares of our Series G redeemable convertible preferred stock issued in January 2019) and the resultant reclassification of (i) the carrying value of the redeemable convertible preferred stock to permanent equity and (ii) our redeemable convertible preferred stock warrant liabilities to additional paid-in capital, a component of stockholders' equity (deficit), in connection with such conversion, all of which will occur in connection with the completion of this offering; and
- the issuance of shares of our common stock as a result of the expected net exercise of the 2013 Warrants in connection with the completion of this offering, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, which 2013 Warrants will terminate if not exercised prior to the completion of this offering.

(2) The pro forma as adjusted balance sheet data gives effect to (i) the pro forma adjustments set forth in footnote (1) above and (ii) the issuance and sale of shares of our common stock in this offering at the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' equity (deficit) by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million in the number of shares offered by us at the assumed initial public offering price would increase (decrease) each of cash and cash equivalents, working capital, total assets and total stockholders' equity (deficit) by approximately $.

(3) The pro forma and pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual initial public offering price and other terms of our initial public offering determined at pricing.

(4) We define working capital as current assets less current liabilities. See our audited financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this prospectus, including our audited financial statements and related notes included elsewhere in this prospectus, before making an investment decision. If any of the following risks are realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the trading price of our common stock could decline and you could lose part or all of your investment.

Risks Related to Our Business and Strategy

We have a history of losses, we expect to incur net losses in the future and we may not be able to generate sufficient revenue to achieve and maintain profitability.

We have incurred net losses since our inception. For the years ended December 31, 2017 and 2018, we have incurred net losses of $25.6 million and $ million, respectively, and we expect to incur additional losses this year and in future years. As of December 31, 2018, we had an accumulated deficit of $ million. Over the next several years, we expect to continue to devote substantially all of our resources to increase adoption of, and reimbursement for, our testing products, to promote SIMPONI®, to develop future testing products and to continue to execute our integrated testing and therapeutics strategy. We may not be able to generate sufficient revenue to achieve and maintain profitability. Our failure to achieve and maintain profitability in the future could cause the market price of our common stock to decline.

We only recently began transitioning toward an integrated testing and therapeutics strategy. Consequently, any predictions about our future success, performance or viability may not be as accurate as they could be if we had a longer history of utilizing an integrated testing and therapeutics strategy in addition to the sale of our testing products.

In the near-term, we expect that our financial results will depend primarily on sales of our testing products, and we will need to generate sufficient revenue from these testing products to grow our business.

A significant majority of our historical revenue has been derived from the sale of our AVISE® CTD testing product, which we commercially launched in 2012. In the near term, we expect to continue to derive a majority of our revenue from sales of AVISE® CTD. We are in various stages of research and development with respect to other testing products that we may offer, but there can be no assurance that we will be able to commercialize these testing products.

The demand for our testing products may decrease or may not continue to increase at historical rates for a number of reasons. In addition, at any point in time we may decide to no longer commercialize any of our testing products for any number of reasons. While we have experienced revenue growth from the sale of our testing products, we may not be able to sustain this growth or maintain existing revenue levels. Further, we cannot ensure the continued availability of our testing products in commercial quantities at acceptable costs. If we are unable to increase sales of our testing products, expand reimbursement for our testing products, or successfully develop and commercialize additional testing products, our revenue and our ability to achieve and sustain profitability would be impaired, and the market price of our common stock could decline.

Our future growth depends, in part, on our ability to execute on our strategy of integrating the promotion of our existing and future proprietary testing products with the promotion of therapeutics, and we may be unsuccessful in our promotion efforts for SIMPONI®, which could adversely affect our ability to implement this strategy.

We are in the process of integrating our historical testing products business with the promotion of therapeutics in an integrated testing and therapeutics strategy. Our future growth is dependent, in part, on our ability to leverage our unique commercial model of offering testing products combined with therapeutics, including with respect to the Janssen agreement, which we entered into in December 2018 to exclusively promote SIMPONI® in the United States. We may encounter difficulties in successfully promoting SIMPONI® and generating significant revenue under the Janssen agreement. Our ability to effectively co-promote SIMPONI® will require us to be successful in a range of activities, including hiring, training and deploying additional sales representatives and creating demand for SIMPONI® through our commercial and sales activities as well as those of Janssen Biotech, Inc., or Janssen. Janssen also has the right to terminate the Janssen agreement with or without cause after 30-days' notice. If Janssen were to exercise this right, we may be unable to recoup substantial investments we intend to make in order to support the promotion of SIMPONI®. We have a limited history partnering with pharmaceutical companies for the promotion of therapeutics. Consequently, any predictions made about our future success or viability with respect to our promotion activities may not be as accurate as they could be if we had a history of successfully co-promoting therapeutics.

If we fail to successfully promote SIMPONI®, our ability to implement our integrated testing and therapeutics strategy and generate sufficient revenue to grow and sustain our business, and our business, financial condition and results of operations, will be materially adversely affected.

We may be unable to manage our ongoing and future growth effectively, which could make it difficult to execute our business strategy.

In addition to the need to scale our testing capacity, our future growth plans will also impose significant added responsibilities on management, including the need to identify, recruit, train and integrate additional employees and the need to manage additional relationships with various partners, suppliers and other third parties. In particular, we are in the process of expanding our salesforce from 31 representatives as of December 31, 2018 to up to 60 representatives by the end of the first quarter of 2019 to help increase reach and frequency and support our integrated promotion of testing products and therapeutics. In addition, rapid and significant growth may strain our administrative and operational infrastructure and require us to expand our financial, development, regulatory, manufacturing, marketing and sales capabilities or contract with third parties to provide these capabilities for us. Our ability to manage our business and growth, as well as function as a public company, will require us to continue to improve our operational, financial and management controls, reporting systems and procedures. The time and resources required to optimize these systems is uncertain, and failure to complete optimization in a timely and efficient manner could adversely affect our operations. If we are unable to manage our ongoing and future growth effectively, it may be difficult for us to execute our business strategy and our business could be harmed.

If we lose or are unable to secure partners for our integrated testing and therapeutics strategy, or if our partners do not apply adequate resources to their relationships with us or are unable to provide, on a timely basis, an adequate and reliable supply of the therapeutics that we promote, our potential for profitability may be adversely affected.

In addition to the Janssen agreement, we plan to opportunistically evaluate, and may continue to enter into, additional agreements with pharmaceutical companies to integrate the promotion of our testing products with their therapeutics. We have also entered into, and may continue to enter into, other agreements that leverage our testing products and data generated from such tests. For example, we provide GSK our test result data to provide market insight into and help increase awareness of the

benefits of an early and accurate diagnosis of SLE; and our AVISE® MTX test data is used by Horizon Pharma to report on levels of MTXPG in patients undergoing methotrexate therapy in combination with its anti-gout product, KRYSTEXXA®, in an ongoing Phase 4 clinical trial.

The amount and timing of resources applied by our current or potential future partners are largely outside of our control. For example, we have limited control over, and rely on Janssen for, numerous activities that are critical to our ability to successfully promote SIMPONI®, such as pricing decisions, manufacture and supply of SIMPONI®, reimbursement support, marketing materials, the prosecution and enforcement of patents and other intellectual property rights related to SIMPONI® and public communications and presentations regarding SIMPONI®. We likewise have limited control of how our other partners use the information provided by our testing products.

If any of our current or future partners breaches or terminates our agreements, or fails to conduct the activities contemplated by our agreements in a timely manner, our success promoting the applicable therapeutics, testing products or information provided thereby could be diminished or blocked completely. It is possible that partners will change their strategic focus, pursue alternative technologies or develop alternative products, either on their own or in collaboration with others. For example, under the Janssen agreement, Janssen is not prohibited from developing or commercializing products that are competitive with SIMPONI®. If Janssen commercializes any competing products, it may provide lower levels of support to SIMPONI® or may terminate our agreement entirely. The effectiveness of our partners, if any, in marketing the applicable therapeutics will also affect our revenue and earnings. In addition, if our other partners encounter problems with our testing products or information provided by our testing products that they rely on as part of their efforts, our reputation and that of our testing products could be damaged, and it could impair our ability to enter into future agreements to promote therapeutics.

We rely on Janssen to provide, on a timely basis, an adequate and reliable supply of SIMPONI®. Any delay or interruption of supply or Janssen's failure to comply with regulatory or other requirements could limit its ability to make, or cause it to cease sales, of SIMPONI®. Any manufacturing defect or error discovered after SIMPONI® has been produced and distributed could result in even more significant consequences, including costly recall procedures. In addition, the importation of pharmaceutical products into the United States is subject to regulation by the FDA, and the FDA can refuse to allow an imported product into the United States if it appears that the product fails to comply with applicable laws or regulations. Moreover, Janssen and its third-party manufacturers and suppliers may experience difficulties related to their overall business and financial stability. To the extent Janssen faces manufacturing difficulties or is unable to provide an adequate and reliable supply of SIMPONI® on a timely basis, our reputation could be harmed and our business could suffer.

We do not have the capability and do not intend to discover or develop therapeutics on our own. Therefore, the success of our integrated testing and therapeutics strategy depends in part on our ability to acquire additional rights to promote therapeutics from new or existing partners. Other companies, many of which have substantially greater financial, marketing and sales resources than we do, also compete with us for the acquisition of rights to therapeutics. In addition, under the Janssen agreement, we are prohibited from selling or promoting certain types of products that are used to treat the same indications that SIMPONI® is used to treat. We may not be able to successfully negotiate any additional agreements to promote therapeutics and, if established, these relationships may not be successful. For example, potential partners, particularly those that are actively marketing their own therapeutics, may be unwilling to license commercialization rights to us or otherwise enter into terms that allow us to meaningfully participate in sales growth for their products, which could limit the potential availability and value to us of additional agreements to promote therapeutics. The inability to enter into agreements for additional therapeutics could limit the overall growth of our business and adversely affect our business, financial condition and results of operations. Disputes could also arise

between us and our existing or future partners, as to a variety of matters, including financial and intellectual property matters or other obligations under our agreements. These disputes would be both expensive and time-consuming and may result in delays in the success of therapeutics or could damage our relationship with a partner.

We may experience limits on our revenue if rheumatologists decide not to order our testing products or our promoted therapeutics or if we are otherwise unable to create or maintain demand for our testing products and promoted therapeutics.

If we are unable to create or maintain demand for either our testing products or promoted therapeutics in sufficient volume, we may not generate sufficient revenue to become profitable. To generate increased demand, we will need to continue to educate rheumatologists about the benefits of our testing products through publications in peer-reviewed medical journals, presentations at medical conferences and other similar means. We will also need to generate demand for both our testing products and promoted therapeutics through one-on-one education by our salesforce. We also plan to focus on educating patients about the benefits of these testing products and therapeutics, which we believe will be necessary to generate further demand. In addition, our inability to obtain and maintain coverage and adequate reimbursement from third-party payers may limit adoption by rheumatologists. With respect to SIMPONI® in particular, if we are unable to generate sales above certain thresholds agreed to with Janssen, we will not receive any payments under the Janssen agreement.

Rheumatologists may rely on guidelines issued by industry groups regarding the diagnosis, prognosis, treatment and monitoring of autoimmune and autoimmune-related diseases, and the monitoring of the effectiveness of therapeutic drugs used to treat such diseases before utilizing any diagnostic test or monitoring solution.

Our commercial success depends upon attaining and maintaining significant market acceptance of our testing products and promoted therapeutics among rheumatologists, patients, third-party payers and others in the medical community.

Our success depends on our ability to continue to develop and market testing products and promote therapeutics that are recognized and accepted as safe, effective, reliable and cost effective, and any testing product or promoted therapeutic that we offer may not gain or maintain market acceptance among rheumatologists, third-party payers, patients and the medical community. Market acceptance of our testing products and promoted therapeutics depends on a number of factors, including:

- the perceived accuracy of our test results by rheumatologists and patients;
- the potential and perceived advantages of our testing products and promoted therapeutics over alternative products and therapeutics;
- the demonstration in clinical studies of the performance and clinical validity of our testing products, the results of which studies may not replicate the positive results from earlier studies;
- the demonstration of clinical efficacy and safety of our promoted therapeutics compared to other more-established products;
- the introduction of new tests or therapeutics products that compete with our testing products or our promoted therapeutics or the introduction of generic versions of our promoted therapeutics;
- the product cost in relation to alternative products;
- the prevalence and severity of any adverse effects from our promoted therapeutics;
- the willingness of the target patient population to try new therapies and of rheumatologists to prescribe these therapies;
- any restrictions on the use of our promoted therapeutics, if approved, together with other medications

- publicity concerning our testing products and promoted therapeutics or competing products and treatments;
- the availability of coverage and adequate reimbursement by third-party payers, including government authorities;
- relative convenience and ease of administration; and
- the effectiveness of our sales and marketing efforts.

In addition, if we or our partners had to withdraw a product from the market, it could harm our business and could impact market acceptance of our other testing products or promoted therapeutics. If our testing products and promoted therapeutics do not achieve an adequate level of acceptance by rheumatologists, hospitals, third-party payers or patients, we may not generate sufficient revenue from that testing product or therapeutic and may not become or remain profitable. Our efforts to educate the medical community and third-party payers regarding the benefits of our testing products and promoted therapeutics may require significant resources and may never be successful.

The sizes of the markets for our testing products and promoted therapeutics have not been established with precision, and may be smaller than we estimate.

Our estimates of the annual total addressable markets for our current and potential future testing products and promoted therapeutics are based on a number of internal and third-party estimates. These include, without limitation, the number of patients with autoimmune and autoimmune-related diseases and the assumed prices at which we can sell testing products and our partners can sell therapeutics in markets that have not been established. While we believe our assumptions and the data underlying our estimates are reasonable, these assumptions and estimates may not be correct and the conditions supporting our assumptions or estimates may change at any time, thereby reducing the predictive accuracy of these underlying factors. As a result, our estimates of the annual total addressable market for our current and potential future testing products and promoted therapeutics may prove to be incorrect. If the actual number of patients who would benefit from our testing products and promoted therapeutics, the price at which we and our partners can sell future testing products, or the annual total addressable market for our testing products and promoted therapeutics is smaller than we have estimated, it may impair our sales growth and have an adverse impact on our business.

We may expend our limited resources to pursue a particular testing product or promoted therapeutic and fail to capitalize on other testing products or promoted therapeutics that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus on specific testing products and promoted therapeutics. As a result, we may forego or delay pursuit of opportunities with others that could have had greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. In addition, our spending on current and future research and development programs for testing products may not yield any commercially viable testing products. If we do not accurately evaluate the commercial potential or target market for a potential testing product or promoted therapeutic, we may forego other similar arrangements which would have been more advantageous for us to pursue.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.

Our quarterly and annual operating results may fluctuate significantly, which makes it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are outside of our control, including, but not limited to:

- our ability to successfully market and sell our AVISE® testing products and commence our promotion of and continue to promote SIMPONI®;

- the extent to which our current testing and future testing products, if any, are eligible for coverage and reimbursement from third-party payers;
- the timing and cost of, and level of investment in, research, development, regulatory approval and commercialization activities relating to our testing products, which may change from time to time, and our ability to successfully commercialize new testing products;
- the cost of supplies, equipment and materials used for our testing products and laboratory operations, which may vary depending on the quantity of production and the terms of our agreements with third-party suppliers and manufacturers;
- expenditures that we may incur to acquire, develop or commercialize additional testing products and technologies;
- the level of demand for our testing products and promoted therapeutics, which may vary significantly;
- the receipt, timing and mix of revenue for our testing products and promoted therapeutics;
- future accounting pronouncements or changes in our accounting policies;
- the rate and extent to which payers make an overpayment determination and require us to return all or some portion of payments which we received in a prior period; and
- the timing and success or failure of competing products, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, it could have a material adverse effect on our business, financial condition and results or operations.

We rely on sole suppliers for some of the reagents, equipment and other materials used in our testing products, and we may not be able to find replacements or transition to alternative suppliers.

We rely on sole suppliers for critical supply of reagents, equipment and other materials that we use to perform the tests that comprise our testing products. We also purchase components used in our testing product transportation kits from sole-source suppliers. Some of these items are unique to these suppliers and vendors. While we have developed alternate sourcing strategies for many of these materials and vendors, we cannot be certain whether these strategies will be effective or the alternative sources will be available when we need them. We are not a major customer of some of our suppliers, and these suppliers may therefore give other customers' needs higher priority than ours. If our suppliers can no longer provide us with the materials we need to perform the tests that comprise our testing products, if the materials do not meet our quality specifications, or if we cannot obtain acceptable substitute materials, an interruption in test processing could occur and, in certain circumstances, we may be required to amend or cancel test results we have issued.

In addition, if we should encounter delays or difficulties in securing the quality and quantity of equipment we require for our testing products, we may need to reconfigure our test processes, which could result in an interruption in sales. Any such interruption may significantly affect our future revenue and harm our customer relations and reputation. In addition, in order to mitigate these risks, we may need to maintain inventories of these supplies at higher levels than would be the case if multiple sources of supply were available.

If we are unable to support demand for our current testing products or any of our future testing products or solutions, our business could suffer.

If demand for our testing products or any of our future testing products or solutions grows, we will need to continue to scale our testing capacity and processing technology, expand customer service, billing and systems processes and enhance our internal quality assurance program. We may also need additional certified laboratory scientists and other scientific and technical personnel to process higher volumes of our testing products. We cannot assure you that any increases in scale, related improvements and quality assurance will be successfully implemented or that appropriate personnel will be available. We will also need to purchase additional equipment, some of which can take several months or more to procure, setup and validate, and increase our software and computing capacity to meet increased demand. Failure to implement necessary procedures, transition to new processes, hire the necessary personnel, obtain any necessary additional equipment and increase software and computing capacity could result in higher costs of processing tests or inability to meet demand. There can be no assurance that we will be able to perform our testing on a timely basis at a level consistent with demand, or that our efforts to scale our operations, expand our personnel, equipment, software and computing capacities, or implement process enhancements will be successfully implemented and will not negatively affect the quality of test results. In addition, there can be no assurance that we will have adequate space in our laboratory facility to accommodate such required expansion. We are also currently collaborating with third parties in an effort to implement multiplex technology in our laboratory. We may experience difficulties securing a partner for this technology and integrating such technology into our existing laboratory operations, which could affect our ability to meet demand for our testing products. If we encounter difficulty meeting market demand or quality standards, our reputation could be harmed and our future prospects and our business could suffer.

If third-party payers do not provide coverage and adequate reimbursement for our testing products, or they breach, rescind or modify their contracts or reimbursement policies or delay payments for our testing products or promoted therapeutics, or if we or our partners are unable to successfully negotiate payer contracts, our commercial success could be compromised.

Successful commercialization of our testing products depends, in large part, on the availability of coverage and adequate reimbursement from third-party payers, including government payers, such as Medicare and Medicaid and private insurers. For the testing products that we develop and commercialize as well as the therapeutics we promote, each third-party payer decides whether to cover the product, the amount it will reimburse for a covered product and the specific conditions for reimbursement.

Reimbursement by third-party payers may depend on a number of factors, including the payer's determination that tests using our technologies are:

- not experimental or investigational;
- medically necessary;
- demonstrated lead to improved patient outcomes;
- appropriate for the specific patient;
- cost-saving or cost-effective;
- supported by peer-reviewed medical journals; and
- included in clinical guidelines.

If we are unable to provide third-party payers with sufficient evidence of the clinical utility and validity of our test, they may not provide coverage, or may provide limited coverage, which will adversely affect our revenue and our ability to succeed. In addition, clinicians may be less likely to order a test unless third-party payers pay a substantial portion of the test price. Therefore, coverage determinations and reimbursement levels and conditions are critical to commercial success, and if we

are not able to secure positive coverage determinations and reimbursement levels, our business will be materially adversely affected.

Third-party payers and other entities also conduct technology assessments of new medical tests and devices and provide and/or sell the results of their assessments to other parties. These assessments may be used by third-party payers and health care providers as grounds to deny coverage for or refuse to use a test or procedure. In addition, third-party payers, have increased their efforts to control the cost, utilization and delivery of healthcare services. These measures have resulted in reduced payment rates and decreased utilization for the diagnostics industry.

Effective April 25, 2012, Palmetto GBA, the Medicare molecular diagnostic services program's, or MolDx Program's, contractor, assigned the AVISE® MTX assay a unique identifier and determined that the test meets the applicable Medicare coverage criteria to support dose optimization and therapeutic decision making for patients diagnosed with RA on methotrexate. Our current Medicare contractor, Noridian, has adopted this coverage policy. Other third-party payers make their own decisions as to whether to establish a policy to reimburse our testing products, however, and because approvals must be sought on a payer by payer basis, establishing broad coverage is a time-consuming and costly process. There are many third-party payers who have not yet established a coverage policy applicable to our testing products. In addition, several Blue Cross Blue Shield plans and Aetna issued non-coverage policies with respect to AVISE® Lupus, determining that AVISE® Lupus does not meet the medical criteria for coverage and is considered investigational and/or experimental.

While our testing products are reimbursed by a number of third-party payers, we do not currently have contracts with significant private payers. We have in the past, and will likely in the future, experience delays and temporary interruptions in the receipt of payments from third-party payers due to changes in their internal processes, documentation requirements and other issues, which could cause our revenue to fluctuate from period to period.

If we are not successful in reversing existing non-coverage policies, or if other third-party payers issue negative coverage policies, these policies could have a material adverse effect on our business and operations. Even if many third-party payers currently reimburse for our testing products, such payers may withdraw coverage at any time, review and adjust the rate of reimbursement, require co-payments from patients or stop paying for our testing products altogether, any of which would reduce our revenue.

Billing for our testing products is complex, and we must dedicate substantial time and resources to the billing process to be paid for our testing products.

Billing for our testing products is complex, time consuming and expensive. Depending on the billing arrangement and applicable law, we bill various third-party payers, including Medicare and private insurance companies, as well as patients, all of which have different billing requirements. We generally bill third-party payers for our testing products and pursue reimbursement on a case-by-case basis where pricing contracts are not in place. We may also face increased risk in our collection efforts, including long collection cycles and potential delays in claims processing, which could adversely affect our business, results of operations and financial condition.

Several factors contribute to the complexity of the billing process, including:

- differences between the list price for our testing products and the reimbursement rates of third-party payers;
- compliance with complex federal and state regulations related to billing Medicare;
- disputes among third-party payers as to which party is responsible for payment;

- differences in coverage among third-party payers;
- the effect of patient deductibles, co-payments or co-insurance;
- differences in information and billing requirements among third-party payers;
- changes to billing codes used for our testing products;
- risk of government audits related to billing;
- incorrect or missing billing information; and
- the resources required to manage the billing and claims appeals process.

We use standard industry billing codes, known as CPT codes, to bill for our testing products. If these codes were to change, there is a risk of an error being made in the claim adjudication process. Such errors can occur with claims submission, third-party transmission or in the processing of the claim by the payer. Claim adjudication errors may result in a delay in payment processing or a reduction in the amount of the payment received.

As we introduce new testing products, we will need to add new codes to our billing process as well as our financial reporting systems. Failure or delays in effecting these changes in external billing and internal systems and processes could negatively affect our collection rates, revenue and cost of collecting.

Our billing activities require us to implement compliance procedures and oversight, train and monitor our employees, and undertake internal audits to evaluate compliance with applicable laws and regulations as well as internal compliance policies and procedures. When payers deny our claims, in order to obtain reimbursement for services that we provide, we may challenge coverage and payment denials. Payers also conduct external audits to evaluate payments, which add further complexity to the billing process. If the payer makes an overpayment determination, there is a risk that we may be required to return all or some portion of prior payments we have received. Additionally, the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, collectively the Affordable Care Act, or ACA, established a requirement for providers and suppliers to report and return any overpayments received from government payers under the Medicare and Medicaid programs within 60 days of identification. Failure to identify and return such overpayments exposes the provider or supplier to liability under federal false claims laws.

Additionally, from time to time, third-party payers change processes that may affect timely payment. These changes may result in uneven cash flow or impact the timing of revenue recognized with these payers. With respect to payments received from governmental programs, factors such as a prolonged government shutdown could cause significant regulatory delays or could result in attempts to reduce payments made to us by federal government healthcare programs. In addition, third-party payers may refuse to ultimately make payment if their processes and requirements have not been met on a timely basis. These billing complexities, and the related uncertainty in obtaining payment for our testing products could negatively affect our revenue and cash flow, our ability to achieve profitability, and the consistency and comparability of our results of operations.

In 2018, Noridian posted the final Medicare Physician Fee Schedule, or MPFS, and Clinical Laboratory Fee Schedule, or CLFS, which establishes the reimbursement rates to be paid by Medicare for our coverage area for tests performed after January 1, 2019. We have estimated that the implementation of these reimbursement rates will result in an approximate 10.1% reduction in anticipated reimbursements from Medicare from our AVISE® CTD testing product from levels experienced in 2018. Revenue from Medicare and revenue from the sale of our AVISE® CTD testing products comprised 30% and 85%, respectively, of our revenue in the year ended December 31, 2018.

We also rely on a third-party provider to provide revenue cycle management software systems for certain processing and collection functions. In the past, we have experienced delays in claims processing as a result of our third-party provider making changes to its invoicing system, as well as not submitting claims to payers within the timeframe required. If claims for our testing products are not submitted to payers on a timely basis, or if we are required to switch to a different systems provider, it could have an adverse effect on our revenue and our business.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

At times, we share our proprietary technology and confidential information, including trade secrets, with third parties that conduct studies and other services on our behalf. We seek to protect our proprietary technology, in part, by entering into confidentiality agreements, consulting agreements or other similar agreements with our advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are intentionally or inadvertently incorporated into the technology of others or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets and despite our efforts to protect our trade secrets, a competitor's discovery of our proprietary technology and confidential information or other unauthorized use or disclosure would impair our competitive position and may have a material adverse effect on our business, financial condition, results of operations and prospects.

Significant safety or efficacy issues could arise for our promoted therapeutics, which could have an adverse effect on our revenue and financial condition.

Pharmaceutical products receive regulatory approval based on data obtained in controlled clinical trials of limited duration. Following regulatory approval, these products will be used over longer periods of time in many patients. Investigators may also conduct additional, and perhaps more extensive, studies. If new safety or efficacy issues are reported or if new scientific information becomes available (including results of post-marketing Phase 4 trials), or if governments change standards regarding safety, efficacy or labeling, our partners may be required to amend the conditions of use for a therapeutic. For example, a partner may voluntarily provide or be required to provide updated information on a therapeutic's label or narrow its approved indication, either of which could reduce the therapeutic's market acceptance. If safety or efficacy issues with a partner's therapeutic arise, sales of the therapeutic could be halted by the partner or by regulatory authorities. Safety or efficacy issues affecting suppliers' or competitors' products also may reduce the market acceptance of one of our partner's therapeutics.

New data about a partner's therapeutics, or products similar to a partner's therapeutics, could negatively impact demand for such therapeutics due to real or perceived safety issues or uncertainty regarding efficacy and, in some cases, could result in product withdrawal. Furthermore, new data and information, including information about therapeutic misuse, may lead government agencies, professional societies, practice management groups or organizations involved with various diseases to publish guidelines or recommendations related to the use of such therapeutics or the use of related therapies or place restrictions on sales. Such guidelines or recommendations may lead to lower sales of the applicable therapeutics and reduce our revenue or otherwise adversely affect our business, prospects, results of operations or financial condition.

If we are unable to maintain or expand our sales and marketing force to adequately address our customers' and current or future partners' needs, our business may be adversely affected.

We sell our testing products through our own specialized salesforce and have recently increased our salesforce in order to achieve the optimal reach and frequency and support our strategy of integrating the promotion of testing products and therapeutics. Our testing products compete in a concentrated specialty market, that of autoimmune and autoimmune-related diseases, and utilizing a specialized salesforce is integral to our integrated testing and therapeutics strategy. As such, we believe it is necessary to maintain a salesforce that includes sales representatives with specific technical backgrounds and industry expertise. Additional agreements for the promotion of therapeutics may require us to further expand our specialized salesforce. Training of additional sales representatives can be costly and time consuming, particularly given the level of experience and sophistication we seek in our salesforce. In addition, until recently, not all of our sales representatives have promoted therapeutics, including SIMPONI®, as part of our organization, and they will need to complete additional training in order to effectively promote SIMPONI® and any other therapeutics that we promote through additional agreements. If we are unable to effectively retain, train and integrate additional sales representatives, it may adversely affect our ability to effectively market and sell our testing products. In addition, competition for highly specialized sales personnel is intense, and we may not be able to attract and retain personnel or be able to maintain an efficient and effective sales and marketing force.

Our future sales will depend in large part on our ability to maintain an effective salesforce. If we are unsuccessful in this regard, it could negatively impact our revenue growth and potential profitability.

If we are unable to compete successfully, we may be unable to increase or sustain our revenue or achieve profitability.

Our principal competition for our testing products is traditional methods used by healthcare providers to test patients with CTD-like symptoms. Such traditional methods include testing for a broad range of diagnostic, immunology and chemistry biomarkers, such as anti-nuclear antibodies, or ANA, and anti-double-stranded DNA, or anti-dsDNA, and serum complement biomarkers, such as C3 and C4. We also face competition from commercial laboratories, such as Laboratory Corporation of America Holdings, Quest Diagnostics Incorporated, ARUP Laboratories, Inc. and the Mayo Clinic, all of which have existing infrastructures to support the commercialization of diagnostic services. Large, multispecialty group medical clinics, health systems and academic medical university-based clinics may provide in-house clinical laboratories offering autoimmune and autoimmune-related disease testing services. Additionally, we compete against regional clinical laboratories providing testing in the autoimmune and autoimmune-related disease field, including Rheumatology Diagnostics Laboratories, Inc. Other potential competitors include companies that might develop diagnostic or disease or drug monitoring products, such as Myriad Genetics, Inc., Progentec Diagnostics Inc., Kypha, LLC, Genalyte Inc., Oxford Immunotec, Inc., Protagen AG, DxTerity Diagnostics Inc., HealthTell, Inc. and Immunovia AB. In the future, we may also face competition from companies developing new products or technologies.

Direct competition for the promotion of SIMPONI® includes all other companies with anti-TNF biologics and the marketing companies supporting their distribution and promotion. These products include HUMIRA® from Abbvie Inc., ENBREL® from Amgen Inc., CIMZIA® from UCB, INFLECTRA® from Pfizer, (biosimilar REMICADE®) and RENFLEXIS® from Merck & Co. (biosimilar REMICADE®). Additional competitors include companies with other biologic drugs indicated for RA that have significant sales or sales potential. Specifically, these include ORENCIA® from Bristol-Myers Squibb Company, ACTEMRA® from Roche, RITUXAN® from Roche, XELJANZ® from Pfizer, KEVZARA® from Sanofi S.A. and OLUMIANT® from Eli Lilly and Company. There are also several late-stage RA drug and biosimilar development programs and several additional RA products that have minimal sales to

date or that are indicated for other rheumatic indications competitive to SIMPONI® such as psoriatic arthritis and ankylosing spondylitis.

We believe the principal competitive factors in our target market include: quality and strength of clinical and analytical validation data; confidence in diagnostic results; safety and efficacy with respect to promoted therapeutics; sales and marketing capabilities; the extent of reimbursement; inclusion in clinical guidelines; cost-effectiveness; and ease of use.

Many of our potential competitors have widespread brand recognition and substantially greater financial, technical and research and development resources and selling and marketing capabilities than we do. Others may develop products with prices lower than ours that could be viewed by rheumatologists and payers as functionally equivalent to our solution or offer solutions at prices designed to promote market penetration, which could force us to lower the list price of our products and affect our ability to achieve profitability. If we are unable to change clinical practice in a meaningful way or compete successfully against current and future competitors, we may be unable to increase market acceptance and sales of our products, which could prevent us from increasing our revenue or achieving profitability and could cause the market price of our common stock to decline.

To compete successfully we must be able to demonstrate, among other things, that our testing products are accurate and cost effective and that we are effective in promoting therapeutics.

Developing new testing products involves a lengthy and complex process, and we may not be able to commercialize on a timely basis, or at all, other testing products we are developing.

We will continue to devote considerable resources to the research and development of our planned future testing products and enhancements to our current testing products. We may not be able to develop testing products with the clinical utility necessary to be useful and commercially successful. There are certain products for which a commercial launch would trigger additional payment obligations to licensors of the technology. In these cases, if the economic projections of the product do not outweigh the additional obligations, we may not launch these products. In order to develop and commercialize testing products, we need to:

- expend significant funds to conduct substantial research and development;
- conduct successful validation studies;
- develop and scale our laboratory processes to accommodate different tests;
- achieve and maintain required regulatory certifications;
- develop and scale our infrastructure to be able to analyze increasingly large amounts of data; and
- build the commercial infrastructure to market and sell new testing products.

Our testing product development process involves a high degree of risk and may take several years. Our testing product development efforts may fail for many reasons, including:

- failure to identify additional biomarkers to incorporate into our testing products;
- failure or sub-optimal performance of the testing product at the research or development stage;
- difficulty in accessing archival patient blood specimens, especially specimens with known clinical results; or
- failure of clinical validation studies to support the effectiveness of the test.

Typically, few research and development projects result in commercial products, and success in early clinical studies often is not replicated in later studies. At any point, we may abandon development

of a testing product candidate or we may be required to expend considerable resources repeating clinical studies, which would adversely affect the timing for generating potential revenue from a new testing product and our ability to invest in other products in our pipeline. In addition, as we develop testing products, we will have to make significant investments in product development, marketing and selling resources. If a clinical validation study fails to demonstrate the prospectively defined endpoints of the study, we might choose to abandon the development of the testing product or product feature that was the subject of the clinical study, which could harm our business. Additionally, competitors may develop and commercialize competing products or technologies faster than us or at a lower cost.

Developing new testing products and enhancements to our existing technologies is expensive and time consuming, and there is no assurance that such activities will result in significant new marketable testing products, enhancements to our current technologies, design improvements, cost savings, revenue or other expected benefits. If we spend significant resources on research and development and are unable to generate an adequate return on our investment or divert resources away from other, more attractive growth opportunities, our business and results of operations may be materially and adversely affected.

If we cannot enter into new clinical study collaborations, our product development and subsequent commercialization could be delayed.

In the past, we have entered into clinical study collaborations, and our success in the future depends in part on our ability to enter into additional collaborations with highly regarded institutions. This can be difficult due to internal and external constraints placed on these organizations. Some organizations may limit the number of collaborations they have with any one company so as to not be perceived as biased or conflicted. Organizations may also have insufficient administrative and related infrastructure to enable collaborations with many companies at once, which can extend the time it takes to develop, negotiate and implement a collaboration. Additionally, organizations often insist on retaining the rights to publish the clinical data resulting from the collaboration. The publication of clinical data in peer-reviewed medical journals is a crucial step in commercializing and obtaining reimbursement for testing products such as our testing products, and our inability to control when and if results are published may delay or limit our ability to derive sufficient revenue from any solution.

We may acquire businesses or assets, form joint ventures or make investments in other companies or technologies that could harm our operating results, dilute our stockholders' ownership, increase our debt or cause us to incur significant expense.

As part of our business strategy, we may pursue acquisitions of complementary businesses or assets, as well as technology licensing arrangements and other strategic transactions or collaborations with third parties. We also may pursue strategic alliances that leverage our core technology and industry experience to expand our offerings or distribution, make investments in other companies or acquire ownership rights to therapeutics that are synergistic with our testing products. To date, other than our acquisition of the medical diagnostics division of Cypress Bioscience, Inc. in 2010, we have not acquired other companies or therapeutics and, except with respect to certain collaboration agreements executed in connection with our integrated testing and therapeutics strategy, we have limited experience with respect to the formation of strategic alliances and joint ventures. If we make any acquisitions, we may not be able to integrate these acquisitions successfully into our existing business, and we could assume unknown or contingent liabilities. Any future acquisitions by us also could result in significant write-offs or the incurrence of debt and contingent liabilities, any of which could harm our operating results. Integration of an acquired company, business or assets also may require management resources that otherwise would be available for ongoing development of our existing business. We may not identify or complete these transactions in a timely manner, on a cost-effective basis, or at all, and we may not realize the anticipated benefits of any acquisition, technology license, strategic alliance, joint venture or investment.

To finance any acquisitions or investments, we may choose to issue shares of our stock as consideration, which would dilute the ownership of our stockholders. Once we become a public company, if the price of our common stock is low or volatile, we may not be able to acquire other companies for stock. Alternatively, it may be necessary for us to raise additional funds for these activities through public or private financings or through the issuance of debt. Additional funds may not be available on terms that are favorable to us, or at all, and any debt financing may involve covenants limiting or restricting our ability to take certain actions.

Also, the anticipated benefit of any strategic alliance, joint venture or acquisition may not materialize or such strategic alliance, joint venture or acquisition may be prohibited. In addition, our loan agreement restricts our ability to pursue certain mergers, acquisitions, amalgamations or consolidations that we may believe to be in our best interest. Additionally, future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition. We cannot predict the number, timing or size of future joint ventures or acquisitions, or the effect that any such transactions might have on our operating results.

The diagnostics and therapeutics industries are subject to rapidly changing technology, which could make our testing products, promoted therapeutics and other testing products we develop obsolete.

Our industry is characterized by rapid technological changes, frequent new product introductions and enhancements and evolving industry standards. These advances require us to continuously develop our technology and work to develop new solutions to keep pace with evolving standards of care. Our testing products could become obsolete unless we continually innovate and expand our testing product offerings to include new clinical applications. If we are unable to develop new testing products or to demonstrate the applicability of our testing products for other diseases, our sales could decline and our competitive position could be harmed. In addition, if our promoted therapeutics become obsolete and we are unable to expand such agreements or find new partners, our sales could decline and our competitive position could be harmed. For example, with respect to SIMPONI® and the treatment of RA, active psoriatic arthritis, or active ankylosing spondylitis, there are many novel therapeutic approaches in development and we expect that the competition in this market will increase dramatically. If new therapeutics make SIMPONI® obsolete or diminish the degree to which rheumatologists prescribe it, our ability to generate revenue under the Janssen agreement will be harmed.

Our failure to maintain relationships or build new relationships with key opinion leaders could materially adversely impact our business and prospects.

Key opinion leaders are able to influence clinical practice by publishing research and determining whether new tests should be integrated into clinical guidelines. We rely on key opinion leaders early in the development process to help ensure our clinical studies are designed and executed in a way that clearly demonstrates the benefits of our testing products to physicians and payers. Our failure to maintain or build new relationships with such key opinion leaders could affect rheumatologist and patient perception of our testing products and result in a loss of existing and future customers and therefore materially adversely impact our business and prospects.

If we are sued for errors and omissions or professional liability, we could face substantial liabilities that exceed our resources.

The marketing, sale and use of our testing products could lead to liability claims if someone were to allege that any such testing product failed to perform as it was designed. We may also be subject to liability for errors in the results we provide to rheumatologists or for a misunderstanding of, or inappropriate reliance upon, the information we provide. We may also be subject to similar types of

claims related to testing products we may develop in the future. An errors and omissions or professional liability claim could result in substantial damages and be costly and time consuming for us to defend. Although we maintain professional liability insurance, we cannot assure you that our insurance would fully protect us from the financial impact of defending against these types of claims or any judgments, fines or settlement costs arising out of any such claims. Any errors or omissions or professional liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any product liability lawsuit could cause injury to our reputation or cause us to suspend sales of our testing products. Similarly, any product liability lawsuit affecting our partners could also cause injury to our reputation or cause the applicable partner to suspend sales of its therapeutics. We may also initiate a correction or removal for one of our testing products, issue a safety alert or undertake a field action or recall to reduce a risk to health posed by potential failure of our products to perform as designed, which could lead increase costs and lead to increased scrutiny by regulatory authorities and our customers regarding the quality and safety of our testing products and to negative publicity, including safety alerts, press releases or administrative or judicial actions. The occurrence of any of these events could have an adverse effect on our business and results of operations.

The loss of members of our senior management team or our inability to attract and retain highly skilled scientists, technicians and salespeople could adversely affect our business.

Our success depends largely on the skills, experience and performance of key members of our executive management team, including Fortunato Ron Rocca, our President and Chief Executive Officer, and others in key management positions. The efforts of each of these persons will be critical to us as we continue to develop our technologies and test processes and focus on our growth. If we were to lose one or more of these key employees, we may experience difficulties in competing effectively, developing our technologies and implementing our business strategy.

In addition, our research and development programs and commercial laboratory operations depend on our ability to attract and retain highly skilled scientists, including licensed clinical laboratory scientists and biostatisticians. We may not be able to attract or retain qualified scientists and technicians in the future due to the intense competition for qualified personnel among life science businesses, particularly in Southern California. Because it is expected that there will be a shortage of clinical laboratory scientists in coming years, it may become more difficult to hire sufficient numbers of qualified personnel. We also face competition from universities and public and private research institutions in recruiting and retaining highly qualified scientific personnel. Additionally, our success depends on our ability to attract and retain qualified and highly-specialized salespeople. We may have difficulties locating, recruiting or retaining qualified salespeople, which could cause a delay or decline in the rate of adoption of our testing products and the sale of promoted therapeutics. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience constraints that could adversely affect our ability to support our research and development, clinical laboratory and sales efforts. All of our employees are at-will, which means that either we or the employee may terminate their employment at any time. We do not carry key man insurance for any of our employees.

If our sole laboratory facility becomes damaged or inoperable, we are required to vacate our existing facility or we are unable to expand our existing facility as needed, we will be unable to perform our testing services and our business will be harmed.

We currently derive all of our revenue from tests conducted at a single laboratory facility located in Vista, California. Vista is situated on or near earthquake fault lines. Our facility and equipment could be harmed or rendered inoperable by natural or man-made disasters, including earthquake, fire, flood, power loss, communications failure or terrorism. In particular, we store all of our flow cytometers, the instrument we use to detect CB-CAPs on cells, at our Vista facility. If all of our flow cytometers were

rendered inoperable simultaneously pursuant to a natural or man-made disaster, we would be unable to perform these key tests as we do in the ordinary course of our business. The inability to perform the tests contained in our testing products or to reduce the backlog of analyses that could develop if our facility is inoperable, for even a short period of time, may result in the loss of customers or harm to our reputation, and we may be unable to regain those customers or repair our reputation in the future. Additionally, we store our bio-repository of specimens, which were collected in collaboration with leading academic institutions and help us to further validate our testing products, at our Vista facility. If these specimens were destroyed pursuant to a natural or man-made disaster or otherwise become unavailable, our ability to develop new testing products may be delayed. Furthermore, our facility and the equipment we use to perform our research and development work could be unavailable or costly and time-consuming to repair or replace. It would be difficult, time-consuming and expensive to rebuild our facility or license or transfer our proprietary technology to a third-party, particularly in light of the licensure and accreditation requirements for a commercial laboratory like ours. Even in the unlikely event we are able to find a third party with such qualifications to enable us to conduct the tests contained in our testing products, we may be unable to negotiate commercially reasonable terms.

In order to rely on a third party to perform the tests contained in our testing products, we would need to engage another facility with established state licensure and Clinical Laboratory Improvement Amendments of 1988, or CLIA, accreditation under the scope of which tests could be performed following validation and other required procedures. We cannot assure you that we would be able to find another CLIA-certified facility willing to comply with the required procedures, that any such facility would be willing to perform the tests contained in our testing products for us on commercially reasonable terms, or that it would be able to meet our quality standards.

In order to establish an additional clinical reference laboratory facility, we would have to spend considerable time and money securing adequate space, constructing the facility, recruiting and training employees, and establishing the additional operational and administrative infrastructure necessary to support a second facility. We may not be able, or it may take considerable time, to replicate our testing processes or results in a new facility. Additionally, any new clinical reference laboratory facility opened by us would be subject to certification under CLIA and licensing by several states, including California and New York, which could take a significant amount of time and result in delays in our ability to begin operations.

We believe we have the capacity to meet our projected needs for at least the next 12 months, although we may grow at a rate that is faster than we expect. Beyond this time frame, we may need to further expand our laboratory space. Any future expansion could disrupt laboratory operations, resulting in an inability to meet customer turnaround time expectations, and could be delayed, resulting in slower realization of laboratory efficiencies anticipated from the use of the expanded facilities. Adverse consequences resulting from a delay in the laboratory expansion could harm our relationships with our customers and our reputation, and could affect our ability to generate revenue.

We carry insurance for damage to our property and the disruption of our business, but this insurance may not cover all of the risks associated with damage or disruption to our business, provide coverage in amounts sufficient to cover our potential losses or continue to be available to us on acceptable terms, if at all.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or manmade disasters or business interruptions, for which we are predominantly self-insured. We rely on third- party manufacturers to produce our testing products. Our ability to obtain

clinical supplies of our testing products could be disrupted if the operations of these suppliers were affected by a man-made or natural disaster or other business interruption. In addition, our corporate headquarters is located in Vista, California near major earthquake faults and fire zones, and the ultimate impact on us of being located near major earthquake faults and fire zones and being consolidated in a certain geographical area is unknown. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

Our testing process involves the use of sophisticated state-of-the-art equipment that requires precise calibration, and issues affecting such equipment may delay delivery or impact the quality of the test results to rheumatologists or otherwise adversely affect our operations.

As part of our process of determining CB-CAPs, which is part of our AVISE® Lupus product, we utilize a number of flow cytometers that require calibration and performance validation according to the requirements of the College of American Pathologists, or CAP, at specified time intervals. While we believe we have implemented appropriate controls and metrics in our laboratory to meet such requirements, we cannot provide any assurance that our instruments will not fall out of specification, in which case we would be required to re-calibrate them. Failure to timely re-calibrate our instruments could negatively impact the test results, which could result in liability and harm our reputation. Patient specimens degrade and become unusable generally within 48 hours of collection. Therefore, if we do not have other sufficient properly functioning flow cytometers due to failure to meet specifications or they otherwise become inoperable, our ability to process patient specimens in the required timeframe would be compromised and our business could be harmed.

If we use hazardous materials in a manner that causes contamination or injury, we could be liable for resulting damages.

We are subject to federal, state and local laws, rules and regulations governing the use, discharge, storage, handling and disposal of biological material, chemicals and waste. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, remediation costs and any related penalties or fines, and any liability could exceed our resources or any applicable insurance coverage we may have. The cost of compliance with these laws and regulations may become significant, and our failure to comply may result in substantial fines or other consequences, either of which could negatively affect our operating results.

Failure in our information technology, telephone or other systems could significantly disrupt our operations and adversely affect our business and financial condition.

Information technology and telephone systems are used extensively in virtually all aspects of our business, including laboratory testing, sales, billing, customer service, logistics and management of medical data. The success of our business depends on the ability to obtain, process, analyze, maintain and manage this data. Our management relies on our information systems because:

- patient specimens must be received, tracked and processed on a timely basis;
- test results must be reported on a timely basis;
- billings and collections for all customers must be managed efficiently and accurately;
- third party ancillary billing services require proper tracking and reporting;
- pricing and other information related to our services is needed by our salesforce and other personnel in a timely manner to conduct business;
- patient-identifiable health information must be securely held and kept confidential;
- regulatory compliance requires proper tracking and reporting; and

- proper recordkeeping is required for operating our business, managing employee compensation and other personnel matters.

Our business, results of operations and financial condition may be adversely affected if, among other things:

- our information technology, telephone or other systems fail or are interrupted for any extended length of time;
- services relating to our information technology, telephone or other systems are not kept current;
- our information technology, telephone or other systems do not have the capacity to support expanded operations and increased levels of business;
- data is lost or unable to be restored or processed; or
- data is corrupted due to a breach of security.

Despite the precautionary measures we have taken to prevent breakdowns in our information technology, telephone and other systems, sustained or repeated system failures that interrupt our ability to process test orders, deliver test results or perform testing in a timely manner or that cause us to inadvertently disclose or lose patient information could adversely affect our business, results of operations and financial condition.

Security breaches, loss of data and other disruptions to us, our third-party service providers or our partners could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.

In the ordinary course of our business, we and our partners, and our respective third-party service providers collect and store sensitive data, such as legally protected health information, including de-identified test reports, personally identifiable information about our patients, credit card information, intellectual property, and our proprietary business and financial information. We manage and maintain our applications and data utilizing a combination of on-site and vendor-owned systems. We face a number of risks related to our protection of, and our service providers' protection of, this critical information, including loss of access, unauthorized disclosure and unauthorized access, as well as risks associated with our ability to identify and audit such events. In addition, we have limited control over the storage of sensitive data by our third-party therapeutics partners as well as risks related to the transfer and sale of de-identified data files to such partners.

The secure processing, storage, maintenance and transmission of this critical information is vital to our operations and business strategy, and we devote significant resources to protecting such information. Although we take measures to protect sensitive information from unauthorized access or disclosure, our information technology and infrastructure, and that of our third-party billing and collections provider, may be vulnerable to attacks by hackers or viruses or otherwise breached due to employee error, malfeasance or other activities. While we have not experienced any such attack or breach, if such an event were to occur, our networks would be compromised and the information we store on those networks could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, such as the Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Exonomic and Clinical Health Act, or the HITECH Act, and their implementing regulations and regulatory penalties. Unauthorized access, loss or dissemination could also disrupt our operations, including our ability to process tests, provide test results, bill payers or patients, process claims and appeals, provide customer assistance services, conduct research and development

activities, collect, process and prepare company financial information, provide information about our products and other patient and rheumatologist education and outreach efforts through our website and manage the administrative aspects of our business and could damage our reputation, any of which could adversely affect our business.

In addition, the interpretation and application of federal and state consumer, health-related and data protection laws in the United States are often uncertain, contradictory and in flux. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices. If so, this could result in government-imposed fines or orders requiring that we change our practices, which could adversely affect our business. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices, systems and compliance procedures in a manner adverse to our business.

Performance issues, service interruptions or price increases by our shipping carrier could adversely affect our business, results of operations and financial condition, and harm our reputation and ability to provide testing services on a timely basis.

Expedited, reliable shipping is essential to our operations. While we have recently begun working with United Parcel Service, we still rely extensively on a single carrier, Federal Express Corporation for reliable and secure point-to-point transport of patient specimens to our laboratory and enhanced tracking of these patient specimens. Should Federal Express, or any other carrier we may use in the future, encounter delivery performance issues such as loss, damage or destruction of a specimen, it may be difficult to replace our patient specimens in a timely manner and such occurrences may damage our reputation and lead to decreased utilization from rheumatologists for our testing services and increased cost and expense to our business. In addition, any significant increase in shipping time could adversely affect our ability to receive and process patient specimens on a timely basis.

If we or Federal Express were to terminate our relationship, we would be required to find another party to provide expedited, reliable point-to-point transport of our patient specimens. There are only a few other providers of such nationwide transport services, and there can be no assurance that we will be able to enter into arrangements with such other providers on acceptable terms, if at all. Finding a new provider of transport services would be time-consuming and costly and result in delays in our ability to provide our testing services. Even if we were to enter into an arrangement with any such provider, there can be no assurance that they will provide the same level of quality in transport services currently provided to us by Federal Express. If any new provider does not provide, or if Federal Express does not continue to provide, the required quality and reliability of transport services at the same or similar costs, it could adversely affect our business, reputation, results of operations and financial condition.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, if a corporation undergoes an “ownership change” (generally defined as a greater than 50 percentage-point change (by value) in its equity ownership by “5-percent shareholders,” as defined in the Code, over a three-year period), the corporation’s ability to use its pre-change net operating loss, or NOL, carryforwards and other pre-change tax attributes to offset its post-change federal taxable income and taxes, as applicable, may be limited. Under recently enacted U.S. tax legislation, federal NOL carryforwards generated in periods after December 31, 2017, may be carried forward indefinitely but may only be used to offset 80% of our taxable income annually. Our ability to use a portion of our NOL carryforwards is subject to limitation under Section 382 of the Code as a result of a prior ownership change. If we undergo an ownership change in connection with this offering, or as a result of subsequent shifts in our stock ownership, our ability to utilize our NOL carryforwards and other pre-change tax attributes could be further limited by Sections 382 and 383 of the Code. Similar

provisions of state tax law may also apply. As a result, if we earn net taxable income, our ability to use such pre-change NOL carryforwards and other pre-change tax attributes to offset taxable income and taxes, as applicable, may be limited.

Recent U.S. tax legislation may materially adversely affect our financial condition, results of operations and cash flows.

Recently enacted U.S. tax legislation, known as the Tax Cuts and Jobs Act of 2017, has significantly changed the U.S. federal income taxation of U.S. corporations, including by reducing the U.S. corporate income tax rate and revising the rules governing NOLs. Many of these changes are effective immediately, without any transition periods or grandfathering for existing transactions. The legislation is unclear in many respects and could be subject to potential amendments and technical corrections, as well as interpretations and implementing regulations by the U.S. Treasury and U.S. Internal Revenue Service, any of which could lessen or increase certain adverse impacts of the legislation. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation, which often uses federal taxable income as a starting point for computing state and local tax liabilities. Based on our current evaluation of this legislation, the reduction of the U.S. corporate income tax rate required a provisional write-down of our deferred income tax assets (including the value of our NOL carryforwards and our tax credit carryforwards).

There may be other material adverse effects resulting from the legislation that we have not yet identified. While some of the changes made by the tax legislation may adversely affect us in one or more reporting periods and prospectively, other changes may be beneficial on a going forward basis. We continue to work with our tax advisors to determine the full impact that the recent tax legislation as a whole will have on us. We urge our investors to consult with their legal and tax advisors with respect to such legislation and the potential tax consequences of investing in our common stock.

Our term loan contains restrictions that limit our flexibility in operating our business, and if we fail to comply with the covenants and other obligations under our loan agreement, the lenders may be able to accelerate amounts owed under the facility and may foreclose upon the assets securing our obligations.

In September 2017, we entered into a loan and security agreement, or the loan agreement, with Innovatus Life Sciences Lending Fund I, LP, or Innovatus. The loan agreement is collateralized by substantially all of our personal property, including our intellectual property. The loan agreement also subjects us to certain affirmative and negative covenants, including limitations on our ability to transfer or dispose of assets, merge with or acquire other companies, make investments, pay dividends, incur additional indebtedness and liens and conduct transactions with affiliates. We are also subject to certain covenants that require us to maintain a minimum liquidity of at least $2.0 million and achieve certain minimum amounts of annual revenue, and are required under certain conditions to make mandatory prepayments of outstanding principal. As a result of these covenants, we have certain limitations on the manner in which we can conduct our business, and we may be restricted from engaging in favorable business activities or financing future operations or capital needs until our current debt obligations are paid in full or we obtain the consent of Innovatus, which we may not be able to obtain. On December 7, 2018, we borrowed an additional $5.0 million under the loan agreement, as a result of meeting the requisite trailing twelve-month revenue and gross margin milestones. As of December 31, 2018, there was $ million in principal outstanding under the term loan and an additional $ million outstanding representing interest at 2.5% per annum payable in-kind by adding the amount to the outstanding principal balance of the term loans. Under the loan agreement, we are required to repay any outstanding principal and capitalized interest in monthly installments over a two-year period commencing on October 1, 2020. We cannot be certain that we will be able to generate sufficient cash flow or revenue to meet the financial covenants or pay the principal and accrued interest on our debt.

In addition, upon the occurrence of an event of default, Innovatus, among other things, can declare all indebtedness due and payable immediately, which would adversely impact our liquidity and reduce the availability of our cash flows to fund working capital needs, capital expenditures and other general corporate purposes. An event of default includes, but is not limited to, our failure to pay any amount due and payable under the loan agreement, the occurrence of a material adverse change in our business as defined in the loan agreement, our breach of any representation or warranty in the loan agreement, our breach of any covenant in the loan agreement (subject to a cure period in some cases), a change in control as defined in the loan agreement, our default on any debt payments to a third party in an amount exceeding $500,000 or any voluntary or involuntary insolvency proceeding. If an event of default occurs and we are unable to repay amounts due under the loan agreement, Innovatus could foreclose on substantially all of our personal property, including our intellectual property. We cannot be certain that future working capital, borrowings or equity financings will be available to repay or refinance our debt to Innovatus or any other debt we may incur in the future.

We may require substantial additional capital to finance our planned operations, which may not be available to us on acceptable terms or at all. Our failure to obtain additional financing when needed on acceptable terms, or at all, could force us to delay, limit, reduce or eliminate our product development programs, commercialization efforts or other operations.

We expect capital expenditures and operating expenses to increase over the next several years as we expand our infrastructure, commercial operations and research and development activities. We believe, based on our current plan, that the net proceeds from this offering, together with our current cash and cash equivalents and anticipated future revenue, will be sufficient to meet our anticipated cash requirements for at least the next 12 months. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Our operating plans and other demands on our cash resources may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings or other sources, such as strategic collaborations. If our available cash balances, net proceeds from this offering and anticipated future revenue are insufficient to satisfy our liquidity requirements, including because of lower demand for our testing products or promoted therapeutics or lower-than-expected rates of reimbursement from commercial third-party payers and government payers, or other risks described in this “Risk Factors” section, we may seek to raise additional capital through equity offerings, debt financings, collaborations or licensing arrangements. In the case of the incurrence of further indebtedness, the loan agreement, subject to certain customary exceptions, restricts our ability to incur additional indebtedness or encumber any of our property without the prior consent of Innovatus. Under the loan agreement, we are required to make monthly interest payments at a rate equal to 11% (provided that 2.50% of the 11% is payable in-kind by adding the amount to the outstanding principal balance of the term loans). We may also consider raising additional capital in the future to expand our business, pursue strategic investments, take advantage of financing opportunities, or for other reasons. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. The timing and amounts of our future capital requirements are difficult to forecast and will depend on numerous factors, including: our ability to maintain and grow sales of our testing products, as well as the costs associated with conducting clinical studies to demonstrate the utility of our testing products and support reimbursement efforts; our ability to successfully promote therapeutics; fluctuations in working capital; the costs to expand our sales and marketing capabilities; the costs of developing our product pipeline, including the costs associated with conducting our ongoing and future validation studies; the additional costs we may incur as a result of operating as a public company and the extent to which we in-license, acquire or invest in complementary businesses or products.

Additional funding may not be available to us on acceptable terms, or at all. If we raise funds by issuing equity securities, dilution to our stockholders could result, and the market price of our common

stock could decline. Any equity securities issued also may provide for rights, preferences or privileges senior to those of holders of our common stock. The incurrence of additional indebtedness or the issuance of certain equity securities could result in increased fixed payment obligations and could also result in restrictive covenants, such as limitations on our ability to incur additional debt or issue additional equity, limitations on our ability to acquire or license intellectual property rights, and other operating restrictions that could adversely affect our ability to conduct our business. In addition, our current loan agreement restricts our ability to incur additional indebtedness or encumber any of our property without the prior consent of Innovatus, subject to certain exceptions. In the event that we enter into collaborations or licensing arrangements to raise capital, we may be required to accept unfavorable terms. These agreements may require that we relinquish or license to a third party on unfavorable terms our rights to technologies or product candidates that we otherwise would seek to develop or commercialize ourselves, or reserve certain opportunities for future potential arrangements when we might be able to achieve more favorable terms. If we are not able to secure additional funding when needed, we may have to delay, reduce the scope of or eliminate one or more research and development programs or selling and marketing initiatives. In addition, we may have to work with a partner on one or more of our testing products, promoted therapeutics or market development programs, which could lower the economic value of those programs to our company.

Our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its report on our audited financial statements included in this prospectus.

The report from our independent registered public accounting firm for the year ended December 31, 2017, includes an explanatory paragraph stating that our recurring losses from operations since inception and negative cash flows from operating activities raise substantial doubt about our ability to continue as a going concern. If we are unable to obtain sufficient funding, our business, prospects, financial condition and results of operations will be materially and adversely affected and we may be unable to continue as a going concern. If we are unable to continue as a going concern, we may have to liquidate our assets and may receive less than the value at which those assets are carried on our audited financial statements, and it is likely that investors will lose all or a part of their investment. After this offering, future reports from our independent registered public accounting firm may also contain statements expressing substantial doubt about our ability to continue as a going concern. If we seek additional financing to fund our business activities in the future and there remains substantial doubt about our ability to continue as a going concern, investors or other financing sources may be unwilling to provide additional funding on commercially reasonable terms or at all.

The FDA may modify its enforcement discretion policy with respect to LDTs in a risk-based manner, and we may become subject to extensive regulatory requirements and may be required to conduct additional clinical trials prior to continuing to sell our existing tests or launching any other tests we may develop, which may increase the cost of conducting, or otherwise harm, our business.

If the FDA ends its policy of enforcement discretion with respect to LDTs, and our testing products become subject to the FDA's requirements for premarket review of medical devices, we may be required to cease commercial sales of our testing products and conduct additional clinical testing prior to making submissions to the FDA to obtain premarket clearance or approval. If we are required to conduct such clinical trials, delays in the commencement or completion of clinical testing could significantly increase our test development costs and delay commercialization of any currently-marketed tests that we may be required to cease selling or the commercialization of any future tests that we may develop. Many of the factors that may cause or lead to a delay in the commencement or completion of clinical trials may also ultimately lead to delay or denial of regulatory clearance or approval. The commencement of clinical trials may be delayed due to insufficient patient enrollment, which is a function of many factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites and the eligibility criteria for the clinical trial.

We may find it necessary to engage contract research organizations to perform data collection and analysis and other aspects of our clinical trials, which might increase the cost and complexity of our trials. We may also depend on clinical investigators, medical institutions and contract research organizations to perform the trials, and would control only certain aspects of their activities. Nevertheless, we would be responsible for ensuring that each of our trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on these third parties would not relieve us of our regulatory responsibilities.

We and our third party contractors are required to comply with good clinical practices, or GCPs, which are regulations and guidelines enforced by the FDA, the Competent Authorities of the Member States of the European Economic Area, or EEA, and comparable foreign regulatory authorities for products in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any third party contractor fails to comply with applicable GCPs, the clinical data generated in clinical trials may be deemed unreliable and the FDA, Competent Authorities of the Member States of the EEA or comparable foreign regulatory authorities may require us to perform additional clinical trials before clearing or approving our marketing applications. A failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory clearance or approval process. In addition, if these parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, or if the quality, completeness or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or for other reasons, our clinical trials may have to be extended, delayed or terminated. Many of these factors would be beyond our control. We may not be able to enter into replacement arrangements without undue delays or considerable expenditures. If there are delays in testing or clearances or approvals as a result of the failure to perform by third parties, our research and development costs would increase, and we may not be able to obtain regulatory clearance or approval for our testing products. In addition, we may not be able to establish or maintain relationships with these parties on favorable terms, if at all. Each of these outcomes would harm our ability to market our testing products, or to achieve sustained profitability.

The FDA requires medical device manufacturers to comply with, among other things, current good manufacturing practices for medical devices, known as the Quality System Regulation, which requires manufacturers to follow elaborate design, testing, control, documentation and other quality assurance procedures during the manufacturing process; the medical device reporting regulation, which requires that manufacturers report to the FDA if their device may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if it were to recur; labeling regulations, including the FDA's general prohibition against promoting products for unapproved or "off-label" uses; and the reports of corrections and removals regulation, which requires manufacturers to report to the FDA if a device correction or removal was initiated to reduce a risk to health posed by the device or to remedy a violation of the FDCA caused by the device which may present a risk to health.

Even if we were able to obtain FDA clearance or approval for one or more of our testing products, if required, a testing product may be subject to limitations on the indications for which it may be marketed or to other regulatory conditions. In addition, such clearance or approval may contain requirements for costly post-market testing and surveillance to monitor the safety or efficacy of the product.

The FDA has broad post-market enforcement powers, and if unanticipated problems with our testing products arise, or if we or our suppliers fail to comply with regulatory requirements following FDA clearance or approval, we may become subject to enforcement actions such as:

- adverse publicity, warning letters, untitled letters, fines, injunctions, consent decrees and civil penalties;

- repair, replacement, refunds, recalls, termination of distribution, administrative detention or seizures of our testing products;
- operating restrictions, partial suspension or total shutdown of production;
- customer notifications or repair, replacement or refunds;
- refusing our requests for 510(k) clearance or PMA approvals or foreign regulatory approvals of new testing products, new intended uses or modifications to existing testing products;
- withdrawals of current 510(k) clearances or PMAs or foreign regulatory approvals, resulting in prohibitions on sales of our testing products;
- FDA refusal to issue certificates to foreign governments needed to export testing products for sale in other countries; and
- criminal prosecution

Any of these sanctions could also result in higher than anticipated costs or lower than anticipated sales and have a material adverse effect on our reputation, business, results of operations and financial condition.

In addition, the FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approvals. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing authorization that we may have obtained and we may not achieve or sustain profitability, which would adversely affect our business, prospects, financial condition and results of operations.

Risks Related to Regulatory and Compliance Matters

Healthcare policy and payment changes may have a material adverse effect on our financial condition and results of operations.

Reimbursement to healthcare providers, such as specialized diagnostic service providers like us, is subject to continuing change in policies by third-party payers including governmental payers, such as Medicare and Medicaid, private insurers and other private payers, such as hospitals and private medical groups. Statutory and regulatory changes, retroactive rate adjustments and administrative rulings, and other policy changes may be implemented with little or no prior notice, all of which could materially decrease the range of services for which we are reimbursed or the reimbursement rates paid for our testing products.

On April 1, 2014, the Protecting Access to Medicare Act of 2014, or PAMA, was signed into law, which, among other things, implemented a new payment system for clinical laboratory tests reimbursed under the CLFS. Under the law, clinical laboratories must report laboratory test payment data for each Medicare-covered clinical diagnostic lab test that it furnishes. The reported data must include the payment rate and the volume of each test that was paid by each private third-party payer. Laboratories that fail to report the required payment information may be subject to substantial civil monetary penalties. We bill Medicare for our testing products, and therefore we are subject to reporting requirements under PAMA.

The final PAMA ruling was issued June 17, 2016 indicating that data for reporting for the new PAMA process will begin in 2017, and, beginning in 2018, the Medicare payment rate for each clinical diagnostic lab test, with some exceptions, is equal to the weighted median of the reported private third-party payer payment for the test, as calculated using data collected by applicable laboratories during the data collection period and reported to the Centers for Medicare and Medicaid Services, or CMS, during a specified data reporting period. These revisions to the CLFS have altered payment rates for clinical diagnostic lab tests under the CLFS, with estimated reductions in Medicare reimbursement

rates for AVISE® CTD of 3.2% and 10.1% in 2018 and 2019, respectively. We cannot be sure how revisions to the CLFS will effect reimbursement rates in the future.

Other recent laws make changes impacting clinical laboratories, many of which have already gone into effect. The ACA, enacted in March 2010, requires each medical device manufacturer to pay an excise tax in an amount equal to 2.3% of the price for which such manufacturer sells its medical devices that are listed with the FDA. This excise tax has been temporarily suspended until December 31, 2019, unless additional congressional action is taken. On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas, or Texas District Court Judge, ruled that the entire ACA is invalid based primarily on the fact that the Tax Cuts and Jobs Act of 2017 repealed the tax-based shared responsibility payment imposed by the ACA, on certain individuals who fail to maintain qualifying health coverage for all or part of a year, which is commonly referred to as the “individual mandate”. While the Texas District Court Judge, as well as the current presidential administration and CMS, have stated that this ruling will have no immediate effect, it is unclear how this decision, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA and our business.

Other significant measures contained in the ACA include, for example, coordination and promotion of research on comparative clinical effectiveness of different technologies and procedures, initiatives to revise Medicare payment methodologies, such as bundling of payments across the continuum of care by providers and physicians, and initiatives to promote quality indicators in payment methodologies. The ACA also includes significant new fraud and abuse measures, including required disclosures of financial arrangements with physician customers, lower thresholds for violations and increasing potential penalties for such violations. There have been judicial and Congressional challenges to certain aspects of the ACA, as well as efforts by the current presidential administration to repeal and replace the ACA, and we expect that there will be additional challenges and amendments to the ACA in the future. We are monitoring the impact of the ACA in order to enable us to determine the trends and changes that may be necessitated by the legislation and that, in turn, may potentially impact our business over time.

Additionally, the Budget Control Act of 2011, among other things, resulted in aggregate reductions to Medicare payments to providers of 2% per fiscal year, beginning April 1, 2013, and due to additional legislative amendments to the statute, these reductions will remain in effect through 2027 unless additional congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Some of our flow cytometry tests are reimbursed by the Medicare program under the MPFS. On April 16, 2015, President Obama signed the Medicare Access and CHIP Reauthorization Act of 2015, or MACRA, which, among other actions, repealed the previous statutory formula by which CMS established annual updates to MPFS rates. MACRA created the Merit-Based Incentive Payment System which, beginning in 2019, more closely aligns physician payments with composite performance on performance metrics similar to three existing incentive programs (i.e., the Physician Quality Reporting System, the Value-based modifier program and the Electronic Health Record Meaningful Use program) and incentivizes physicians to enroll in alternative payment methods. At this time, we do not know whether these changes to the physician payment systems will have any impact on orders or payments for our testing products.

Medicare payments are significant to our business, not only because approximately 28% of the total payments we received from payers in the year ended December 31, 2018 were derived from the Medicare program, but also because other payers often use the MPFS and CLFS amounts as a benchmark to develop their payment rates. We cannot predict whether Medicare and other third-party

payer reimbursement rates that mirror Medicare's will be sufficient to make our testing products commercially attractive.

In addition, some third-party payers have implemented, or are in the process of implementing, laboratory benefit management programs, often using third-party benefit managers to manage these programs. The stated goals of these programs are to help improve the quality of outpatient laboratory services, support evidence-based guidelines for patient care and lower costs. The impact on laboratories, such as ours, of active laboratory benefit management by third parties is unclear, and we expect that it could have a negative impact on our revenue in the short term. It is possible that third-party payers will resist reimbursement for testing products that we offer in favor of less expensive tests, may require pre-approval for our testing products or may impose additional pricing pressure on and substantial administrative burden for reimbursement for our testing products.

Product pricing by companies is currently, and is expected to continue to be, under close scrutiny. Such scrutiny has resulted in several recent congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and patient programs, and reform government program reimbursement methodologies for products. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures.

We also cannot predict whether future healthcare initiatives will be implemented at the federal or state level or in countries outside of the United States in which we may do business in the future, or the effect any future legislation or regulation will have on us. Although we cannot predict the full effect of the recent legislative changes discussed above, including taxes imposed by the ACA, cost reduction measures, the expansion in government's role in the U.S. healthcare industry and PAMA's changes to the reimbursement methodology under the CLFS, such changes individually or in the aggregate may result in decreased profits to us and/or lower reimbursement by third-party payers for our testing products, which may adversely affect our business, financial condition and results of operations.

Complying with numerous regulations pertaining to our business is an expensive and time-consuming process, and any failure to comply could result in substantial penalties.

We are subject to CLIA, a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. CLIA regulations mandate specific standards in the areas of personnel qualifications, administration, and participation in proficiency testing, patient test management, quality control, quality assurance and inspections. We have a current certificate of accreditation under CLIA to perform testing through our accreditation by CAP. To renew this certificate, we are subject to survey and inspection every two years. Moreover, CLIA inspectors may make random inspections of our clinical reference laboratory.

Although we are required to hold a certificate of accreditation or compliance under CLIA that allows us to perform high complexity testing, we are not required to hold a certificate of accreditation through CAP. We could alternatively maintain a certificate of accreditation from another accrediting organization or a certificate of compliance through inspection by surveyors acting on behalf of the CLIA program. If our accreditation under CAP were to terminate, either voluntarily or involuntarily, we would need to convert our certification under CLIA to a certificate of compliance (or to a certificate of accreditation with another accreditation organization) in order to maintain our ability to perform clinical testing and to continue commercial operations. Whether we would be able to successfully maintain operations through either of these alternatives would depend upon the facts and circumstances surrounding termination of our CAP accreditation, such as whether any deficiencies were identified by

CAP as the basis for termination and, if so, whether these were addressed to the satisfaction of the surveyors for the CLIA program (or another accrediting organization).

The failure to comply with CLIA requirements can result in enforcement actions, including the revocation, suspension, or limitation of our CLIA certificate of accreditation, as well as a directed plan of correction, state on-site monitoring, civil money penalties, civil injunctive suit and/or criminal penalties. We must maintain CLIA compliance and certification to be eligible to bill for tests provided to Medicare beneficiaries. If we were to be found out of compliance with CLIA program requirements and subjected to sanctions, our business and reputation could be harmed. Even if it were possible for us to bring our laboratory back into compliance, we could incur significant expenses and potentially lose revenue in doing so.

We are also required to maintain a license to conduct testing in California. California laws establish standards for day-to-day operation of our clinical reference laboratory, including the training and skills required of personnel and quality control. In addition, our clinical reference laboratory is licensed on a product-specific basis by New York as an out of state laboratory and our testing products, as LDTs, must be approved by the New York Department of Health, or NYDOH, on a product-by-product basis before they are offered in New York. We are also be subject to periodic inspection by the NYDOH and required to demonstrate ongoing compliance with NYDOH regulations and standards. To the extent NYDOH identified any non-compliance and we are unable to implement satisfactory corrective actions to remedy such non-compliance, the State of New York could withdraw approval for our testing products. New York law also mandates proficiency testing for laboratories licensed under New York state law, regardless of whether or not such laboratories are located in New York. Moreover, several other states require that we hold licenses to test specimens from patients in those states. Other states may have similar requirements or may adopt similar requirements in the future. Although we have obtained licenses from states where we believe we are required to be licensed, we may become aware of other states that require out-of-state laboratories to obtain licensure in order to accept specimens from the state, and it is possible that other states currently have such requirements or will have such requirements in the future.

If we were to lose our CLIA accreditation or California license, whether as a result of a revocation, suspension or limitation, we would no longer be able to sell our testing products, which would limit our revenue and harm our business. If we were to lose our license or fail to obtain or maintain NYDOH approval for our laboratory developed tests in New York or if we were to lose our license in other states where we are required to hold licenses, we would not be able to test specimens from those states which would limit our revenue.

If we fail to comply with healthcare laws and regulations, we could face substantial penalties and our business, operations and financial condition could be adversely affected.

We and our partners, including those with whom we may enter into co-promotion or co-marketing arrangements, are also subject to healthcare fraud and abuse regulation by both the federal government and the states in which we or our partners conduct our business. These laws include, without limitation, state and federal anti-kickback, self-referral, fraud and abuse, false claims, and physician sunshine laws and regulations.

The Federal Anti-kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any good, facility, item or service, including laboratory services, reimbursable, in whole or in part, under Medicare, Medicaid or other federally financed healthcare programs. The term “remuneration” has been broadly interpreted to include anything of value. The Federal Anti-kickback Statute has been interpreted to apply to arrangements between manufacturers on one hand and prescribers, purchasers and formulary mangers on the other. Although

there are a number of statutory exceptions and regulatory safe harbors protecting certain common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Our practices may not in all cases meet all of the criteria for safe harbor protection from anti-kickback liability. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor, however, does not make the conduct per se illegal under the Federal Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the Federal Anti-Kickback Statute has been violated. Further, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it. in order to have committed a violation In addition, the government may assert that a claim including items or services resulting from a violation of the Federal Anti-kickback Statute constitutes a false or fraudulent claim for purposes of the false claims laws.

On June 25, 2014, the Office of Inspector General of the Department of Health and Human Services, or the OIG, released a Special Fraud Alert, expressing concern regarding laboratory payments made to referring physicians and physician group practices for blood specimen collection, processing, and packaging. Specifically, the OIG expressed concern that such arrangements may implicate the Federal Anti-Kickback Statute when laboratories make payments to physicians for services that are already covered and reimbursed by Medicare, or are not commercially reasonable or exceed fair market value, all in order to induce physicians to order tests from such laboratory. Because the choice of laboratory and the decision to order laboratory tests is made or strongly influenced by the physician, with little or no input from patients, such payment may induce physicians to order more laboratory tests than are medically necessary, particularly when the payments are tied to, or take into account, the volume or value of business generated by the physician. We had entered into certain arrangements with physicians for services related to specimen collection, transporting and handling. Effective August 2015, we terminated all such agreements. To date, no regulatory authorities have contacted us regarding these arrangements. To the extent our prior arrangements are found to be inconsistent with applicable laws, we may be subject to significant penalties, including criminal penalties, and exclusion from participation in U.S. federal or state health care programs.

The Federal civil and criminal false claims law, including the False Claims Act, prohibit, among other things, any person from knowingly presenting or causing to be presented a false claim for payment to the federal government, or knowingly making or causing to be made a false statement to get a false or fraudulent claim paid by the federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. In addition, private individuals have the ability to bring actions under these false claims laws in the name of the government alleging false and fraudulent claims presented to or paid by the government (or other violations of the statutes) and to share in any amounts paid by the entity to the government in fines or settlement. Such suits, known as qui tam actions, have increased significantly in the healthcare industry in recent years. In addition, the federal civil monetary penalties statute imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. The majority of states also have statutes or regulations similar to the federal anti-kickback and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payer.

We are also subject to the federal physician self-referral prohibitions, commonly known as the Stark Law, which prohibits, among other things, physicians who have a financial relationship, including an investment, ownership or compensation relationship with an entity, from referring Medicare patients for designated health services, which include clinical laboratory services, unless an exception applies. Similarly, entities may not bill Medicare or any other party for services furnished pursuant to a

prohibited referral. Many states have their own self-referral laws as well, which in some cases apply to all third-party payers, not just Medicare and Medicaid.

In addition, under the federal civil monetary penalties statute, a person is prohibited from offering or transferring to a Medicare or Medicaid beneficiary any remuneration, including waivers of co-payments and deductible amounts (or any part thereof), that the person knows or should know is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of Medicare or Medicaid payable items or services. Moreover, in certain cases, providers who routinely waive copayments and deductibles for Medicare and Medicaid beneficiaries can also be held liable under the Federal Anti-kickback Statute and civil False Claims Act. One of the statutory exceptions to the prohibition is non-routine, unadvertised waivers of copayments or deductible amounts based on individualized determinations of financial need or exhaustion of reasonable collection efforts. The OIG emphasizes, however, that this exception should only be used occasionally to address special financial needs of a particular patient. Although this prohibition applies only to federal healthcare program beneficiaries, the routine waivers of copayments and deductibles offered to patients covered by commercial payers may implicate applicable state laws related to, among other things, unlawful schemes to defraud, excessive fees for services, tortious interference with patient contracts and statutory or common law fraud. To the extent our patient assistance programs are found to be inconsistent with applicable laws, we may be required to restructure or discontinue such programs, or be subject to other significant penalties.

The ACA, among other things, also imposed new reporting requirements on manufacturers of certain devices, drugs and biologics for certain payments and transfers of value by them and in some cases their distributors to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Manufacturers must submit reports by the 90th day of each calendar year. Because we manufacture our own LDTs solely for use by or within our own laboratory, we believe that we are exempt from these reporting requirements. We cannot assure you, however, that our regulators, principally the federal government, will agree with our determination, and a determination that we have violated these laws and regulations, or a public announcement that we are being investigated for possible violations, could adversely affect our business, prospects, results of operations or financial condition.

It is possible that some of our business activities could be subject to challenge under one or more of such laws, including our promotion of SIMPONI®, which is subject to restriction of off-label use discussions Such a challenge, regardless of the outcome, could have a material adverse effect on our business, business relationships, reputation, financial condition and results of operations. Although an effective compliance program can mitigate the risk of investigation and prosecution for violations of these laws, the risks cannot be entirely eliminated. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Moreover, achieving and sustaining compliance with these laws may prove costly. If we or our operations, or any of the rheumatologists or entities with whom we do business are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to significant penalties, including administrative, civil and/or criminal penalties, damages, fines, disgorgement, individual imprisonment, exclusion from participation in U.S. federal or state health care programs, such as Medicare and Medicaid in the U.S. and similar programs outside the U.S., a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, and the curtailment or restructuring of our operations, any of which could materially adversely affect our ability to operate our business and our financial results. To the extent that any of our testing products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Failure to comply with HIPAA, the HITECH Act, their implementing regulations, and similar comparable state laws and regulations affecting the transmission, security and privacy of health information could result in significant penalties.

Numerous federal and state laws and regulations, including HIPAA and the HITECH Act, govern the collection, dissemination, security, use and confidentiality of individually identifiable health information. HIPAA and the HITECH Act require us to comply with standards for the use and disclosure of individually identifiable health information within our company and with third parties. The Standards for Privacy of Individually Identifiable Health Information, or Privacy Standards, and the Security Standards for the Protection of Electronic Protected Health Information, or Security Standards, under HIPAA establish a set of basic national privacy and security standards for the protection of individually identifiable health information by health plans, healthcare clearinghouses and certain healthcare providers, referred to as covered entities, and the business associates with whom such covered entities contract for services. Notably, whereas HIPAA previously directly regulated only these covered entities, the HITECH Act, which was signed into law as part of the stimulus package in February 2009, made certain of the Security Standards directly applicable to business associates. Further, the HITECH Act and the Final HIPAA Omnibus Rule that was promulgated in 2013, made additional parts of HIPAA directly applicable to business associates. As a result, both covered entities and business associates are now subject to significant civil and criminal penalties for failure to comply with the Privacy Standards and/or the Security Standards.

HIPAA and the HITECH Act also include standards for common healthcare electronic transactions and code sets, such as claims information, plan eligibility, payment information and the use of electronic signatures, and privacy and electronic security of individually identifiable health information. Covered entities, such as certain health care providers, are required to conform to such transaction set standards, known as the Standards for Electronic Transactions, pursuant to HIPAA.

HIPAA requires covered entities to develop and maintain policies and procedures with respect to individually identifiable health information that is used or disclosed, including the adoption of administrative, physical and technical safeguards to protect such information. The HITECH Act expands the notification requirement for breaches of individually identifiable health information, restricts certain disclosures and sales of individually identifiable health information and provides a tiered system for civil monetary penalties for HIPAA violations. The Final HIPAA Omnibus Rule modifies the breach reporting standard in a manner that will likely make more data security incidents qualify as reportable breaches. The HITECH Act also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney fees and costs associated with pursuing federal civil actions. Additionally, certain states have adopted comparable privacy and security laws and regulations, some of which may be more stringent than HIPAA.

If we do not comply with the requirements of HIPAA, the HITECH Act or applicable state privacy and security laws, we could be subject to criminal or civil sanctions that could adversely affect our financial condition. The costs of complying with privacy and security related legal and regulatory requirements are burdensome and could have a material adverse effect on our business. These laws are subject to interpretation by various courts and other governmental authorities, thus creating potentially complex compliance issues for us, as well as our physician clients. In addition, we are unable to predict what changes to the HIPAA Privacy Standards and Security Standards might be made in the future or how those changes could affect our business. Any new legislation or regulation in the area of privacy and security of personal information, including individually identifiable health information, could also adversely affect our business operations.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations, which can harm our business.

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended, or FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors, and other collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties to sell our testing products outside the United States, to conduct clinical trials, and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors, and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences.

Our future growth may depend, in part, on our ability to operate in foreign markets, where we would be subject to additional regulatory burdens and other risks and uncertainties.

Our future growth may depend, in part, on our ability to develop and commercialize our testing products and promote therapeutics in foreign markets. We are not permitted to market or promote any of our testing products or promote therapeutics before we or our partners receive regulatory approval from applicable regulatory authorities in foreign markets, and we or they may never receive such regulatory approvals for any of our testing products or promoted therapeutics. To obtain separate regulatory approval in many other countries parties must comply with numerous and varying regulatory requirements regarding safety and efficacy and governing, among other things, clinical trials, commercial sales, pricing and distribution of our testing products. If we or our partners obtain regulatory approval of our testing products and promoted therapeutics, and ultimately commercialize our testing products or promoted therapeutics in foreign markets, we would be subject to additional risks and uncertainties, including:

- different regulatory requirements for approval of drugs in foreign countries;
- reduced protection for intellectual property rights;
- the existence of additional third-party patent rights of potential relevance to our business;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- foreign reimbursement, pricing and insurance regimes;
- workforce uncertainty in countries where labor unrest is common;

- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires.

Risks Related to our Intellectual Property

If we are unable to maintain intellectual property protection our competitive position could be harmed.

Our ability to protect our technologies such as CB-CAPs and methotrexate polyglutamates, or MTXPGs, affects our ability to compete and to achieve sustained profitability. We rely on a combination of U.S. and foreign patents and patent applications, copyrights, trademarks and trademark applications, and contractual restrictions to protect our intellectual property rights. We cannot be certain that the claims in our granted patents and pending patent applications covering our AVISE® testing products will be considered patentable or enforceable by the United States Patent and Trademark Office, or the USPTO, courts in the United States, or by patent offices and courts in foreign countries. If we fail to protect our intellectual property, third parties may be able to compete more effectively against us and we may incur substantial litigation costs in our attempts to recover or restrict use of our intellectual property.

We apply for patents covering our testing products and technologies and uses thereof, as we deem appropriate, however we may fail to apply for patents on important testing products and technologies in a timely fashion or at all, or we may fail to apply for patents in potentially relevant jurisdictions, or we may cease our prosecution and maintenance of patents in potentially relevant jurisdictions. Currently, we have an exclusive license to 13 issued U.S. patents, and certain corresponding foreign counterpart patents, relevant to our AVISE® testing products. We also own two pending U.S. patent applications relevant to our AVISE® testing products. While we intend to pursue additional patent applications, it is possible that our pending patent applications and any future applications may not result in issued patents. Even if such patents do successfully issue, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Any successful opposition to our patents could deprive us of exclusive rights necessary for the further development of our AVISE® testing products. Furthermore, even if they are unchallenged, our patents may not adequately protect our intellectual property, provide exclusivity for our AVISE® testing products or prevent others from designing around our claims.

We might not have been the first to make the inventions covered by each of our pending patent applications and we might not have been the first to file patent applications for these inventions. To determine the priority of these inventions, we may have to participate in interference proceedings, derivation proceedings or other post-grant proceedings declared by the USPTO that could result in substantial cost to us. No assurance can be given that our patent applications will have priority over other patent applications. In addition, recent changes to the patent laws of the United States allow for various post-grant opposition proceedings that have not been extensively tested, and their outcome is therefore uncertain. Furthermore, if third parties bring these proceedings against our patents, we could experience significant costs and management distraction.

In addition to the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, or that we elect not to patent, processes for which patents are difficult to enforce and any other elements of our AVISE® testing products and development processes that involve proprietary know-how, information or technology that is not covered by patents. However, trade secrets can be difficult to protect. While we use commercially reasonable efforts to protect our trade secrets, our licensors, employees,

consultants, contractors and other advisors may unintentionally or willfully disclose such trade secret information to third parties and competitors. We attempt to protect our proprietary technology in large part by entering into confidentiality and non-disclosure agreements with our employees, consultants and other contractors. We cannot assure you, however, that these agreements will not be breached, that we will have adequate remedies for any breach or that competitors will not know of, or independently discover, our trade secrets. We cannot assure you that others will not independently develop substantially equivalent proprietary information or be issued patents that may prevent the sale of our testing products, technologies, services or know-how or require licensing and the payment of significant fees or royalties by us in order to produce our testing products, technologies or services. Further, we cannot be certain that the steps we have taken will prevent the misappropriation of our trade secrets and other confidential information.

Monitoring unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate. If we were to enforce a claim that a third party had illegally obtained and was using our trade secrets, it would be expensive and time consuming, and the outcome would be unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets. If we are unable to prevent unauthorized material disclosure of our trade secrets and other confidential information to third parties, and in particular in jurisdictions where we have not filed for patent protection, we may not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results and financial condition.

Certain of our testing products utilize unpatented technology that is publicly available and can be used by our competitors.

Certain of our AVISE® testing products, such as AVISE® CTD, utilize both patented technology and publicly available technology that is not protected by patents or other intellectual property rights. We believe that using certain publicly available technology allows us to offer a better and more comprehensive testing product. However, the publicly available technology which we rely upon is also used in, and may continue to be used in, products which compete with our AVISE® testing products. Our competitors may independently develop competing diagnostic products and services that do not infringe our intellectual property.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our AVISE® testing products.

Our success is heavily dependent on intellectual property, particularly on obtaining and enforcing patents. Obtaining and enforcing patents in the diagnostics industry involves both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. The United States has enacted and is currently implementing wide-ranging patent reform legislation. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. We may not develop additional proprietary products, methods and technologies that are patentable.

Some of our intellectual property has been discovered through government funded programs and thus may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies. Compliance with such regulations may limit our exclusive rights, and limit our ability to contract with non-U.S. manufacturers.

Some of the intellectual property rights we have acquired or licensed or may acquire or license in the future may have been generated through the use of U.S. government funding and may therefore be subject to certain federal regulations. For example, some of the research and development work related to our CB-CAPs technology was funded by government research grants. As a result, the U.S. government may have certain rights to intellectual property embodied in our testing products pursuant to the Bayh-Dole Act of 1980, or Bayh-Dole Act. These U.S. government rights include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right, under certain limited circumstances, to require us to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third party if it determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; or (iii) government action is necessary to meet requirements for public use under federal regulations (also referred to as "march-in rights"). The U.S. government also has the right to take title to these inventions if the grant recipient fails to disclose the invention to the government or fails to file an application to register the intellectual property within specified time limits. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us to expend substantial resources. In addition, the U.S. government requires that any products embodying any of these inventions or produced through the use of any of these inventions be manufactured substantially in the United States. This preference for U.S. industry may be waived by the federal agency that provided the funding if the owner or assignee of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. industry may limit our ability to contract with non-U.S. product manufacturers for products covered by such intellectual property. To the extent any of our future intellectual property is also generated through the use of U.S. government funding, the provisions of the Bayh-Dole Act may similarly apply.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on our AVISE® testing products in all countries throughout the world would be prohibitively expensive. Moreover, we believe that obtaining foreign patents may be more difficult than obtaining domestic patents because of differences in patent laws and, accordingly, our patent position may be stronger in the United States than abroad. In addition, the laws of some foreign countries do not protect intellectual property rights in the same manner and to the same extent as laws in the United States. Various countries limit the subject matter that can be patented and limit the ability of a patent owner to enforce patents in the medical and other related fields. This may limit our ability to obtain or utilize those patents internationally. In order to manage our foreign patent costs and focus on the U.S. market, we made the decision to cease the prosecution and maintenance of certain of our foreign patents and patent applications related to our CB-CAPs technology, which is used in our AVISE® testing products. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection but enforcement of such patent protection is not as strong as that in the United States. These products may compete with our AVISE® testing products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain

developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

The patent protection and patent prosecution for some of our testing products may be dependent on third parties.

We or our licensors may fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Therefore, we may miss potential opportunities to strengthen our patent position. It is possible that defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, for example with respect to proper priority claims, inventorship, claim scope, or requests for patent term adjustments. If we or our licensors, whether current or future, fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If our licensors are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised. If there are material defects in the form, preparation, prosecution, or enforcement of our patents or patent applications, such patents may be invalid and/or unenforceable, and such applications may never result in valid, enforceable patents. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

As a licensee of third parties, we rely on third parties to file and prosecute patent applications and maintain patents and otherwise protect the licensed intellectual property under some of our license agreements. We have not had and do not have primary control over these activities for certain of our patents or patent applications and other intellectual property rights. We cannot be certain that such activities by third parties have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents or other intellectual property rights. Pursuant to the terms of the license agreements with some of our licensors, the licensors may have the right to control enforcement of our licensed patents or defense of any claims asserting the invalidity of these patents and even if we are permitted to pursue such enforcement or defense, we will require the cooperation of our licensors. We cannot be certain that our licensors will allocate sufficient resources or prioritize their or our enforcement of such patents or defense of such claims to protect our interests in the licensed patents. Even if we are not a party to these legal actions, an adverse outcome could harm our business because it may permit other parties to compete with us If any of our licensors or any of our future licensors or future collaborators fail to appropriately prosecute and maintain patent protection for patents covering any of our testing products, our ability to develop and commercialize those testing products may be adversely affected and we may not be able to prevent competitors from making, using and selling competing products.

In addition, even where we have the right to control patent prosecution of patents and patent applications we have acquired or licensed from third parties, we may still be adversely affected or prejudiced by actions or inactions of our predecessors or licensors and their counsel that took place prior to us assuming control over patent prosecution.

Our technology acquired or licensed from various third parties may be subject to retained rights. Our predecessors or licensors often retain certain rights under their agreements with us, including the

right to use the underlying technology for noncommercial academic and research use, to publish general scientific findings from research related to the technology, and to make customary scientific and scholarly disclosures of information relating to the technology. It is difficult to monitor whether our predecessors or licensors limit their use of the technology to these uses, and we could incur substantial expenses to enforce our rights to our licensed technology in the event of misuse.

If we are limited in our ability to utilize acquired or licensed technologies, or if we lose our rights to critical in-licensed technology, we may be unable to successfully develop, out-license, market and sell our testing products, which could adversely affect our business. Our business strategy depends on the successful development of licensed and acquired technologies into commercial products. Therefore, any limitations on our ability to utilize these technologies may impair our ability to develop, out-license or market and sell our testing products.

If we fail to comply with our obligations in the agreements under which we license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business.

We are a party to a number of license agreements under which we are granted intellectual property rights that are important to our business. For example, certain patent rights related to AVISE® Lupus are licensed from the University of Pittsburgh, certain patent rights related to AVISE® MTX are licensed from Prometheus. Our existing license agreements as related to our AVISE® testing products impose various regulatory and/or commercial diligence obligations, payment of milestones and/or royalties and other obligations. If we fail to comply with our obligations under a license agreement, the license agreement may be terminated, in which event we would not be able to further develop or market certain AVISE® testing products. Additionally, we may not always have the first right to maintain, enforce or defend our licensed intellectual property rights and, although we would likely have the right to assume the maintenance, enforcement and defense of such intellectual property rights if our licensors do not, our ability to do so may be compromised by our licensors' acts or omissions.

Licensing of intellectual property rights is of critical importance to our business and involves complex legal, business and scientific issues. Disputes may arise between us and our licensors regarding intellectual property rights subject to a license agreement, including the scope of rights granted under the license agreement and other interpretation-related issues, and whether and the extent to which our technology and processes infringe on intellectual property rights of the licensor that are not subject to the licensing agreement. If disputes over intellectual property rights that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, our business, results of operations, financial condition and prospects may be adversely affected. We may enter into additional licenses in the future and if we fail to comply with obligations under those agreements, we could suffer adverse consequences.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent process. Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on any issued patents and/or applications are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patents and/or applications. Our outside counsel has systems in place to monitor deadlines to pay these fees and to remind us of these fees, and our outside counsel employs an outside firm to pay these fees due to the USPTO and to foreign patent agencies based on

our instructions. In the aggregate, these fees can be cost prohibitive for an early-stage company. Accordingly, we made a financially-driven decision to prioritize our payment of these fees and to allow certain of our applications to lapse, particularly with respect to our ex-U.S. rights licensed from the University of Pittsburgh related to our CB-CAPs technology. The permanent lapse of certain of these ex-U.S. rights may result in our patent position being stronger in the United States than abroad, such as in countries that are part of the European Patent Convention, and third parties may be able to compete more effectively against us in countries outside the United States, including in those countries that belong to the European Patent Convention. Additionally, while an inadvertent lapse may sometimes be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, our competitors might be able to enter the market earlier than should otherwise have been the case, which would have a material adverse effect on our business.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.

Presently we have intellectual property rights, through licenses from third parties and under patents that we own, related to our AVISE® testing products. Because our programs may involve additional products that require the use of proprietary rights held by third parties, the growth of our business will likely depend in part on our ability to acquire, in-license or use these proprietary rights. We may be unable to acquire or in-license proprietary rights that we identify as being necessary for our AVISE® testing products, and our partner may be unable to acquire any necessary rights for our promoted therapeutics. Even if we are able to obtain a license to such proprietary rights, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology.

The licensing and acquisition of third-party proprietary rights is a competitive area, and companies, which may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party proprietary rights that we may consider necessary or attractive in order to further develop our AVISE® testing products or our partners consider necessary or attractive in order to promote their therapeutic. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities.

In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us, either on reasonable terms, or at all. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment, or at all. If we or our partner are unable to successfully obtain rights to required third-party intellectual property rights on commercially reasonable terms, our ability to further develop our AVISE® testing products and promote therapeutics, and our business, financial condition and prospects for growth could suffer.

Third-party claims alleging intellectual property infringement may prevent or delay our development efforts.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. There is a substantial amount of litigation, both within and outside the United States, involving patents and other intellectual property rights in the diagnostics industry, as well as administrative proceedings for challenging patents, including interference and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. The Leahy-Smith America Invents Act introduced new procedures including inter partes review and post grant review. The implementation of these procedures bring the possibility of third

party challenges to our patents and the outcome of such challenges could result in a loss or narrowing of our patent rights. In such an event, our competitors might be able to enter the market earlier than should otherwise have been the case, which would have a material adverse effect on our business. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our AVISE® testing products. As the diagnostics industry expands and more patents are issued, the risk increases that our activities related to our AVISE® testing products may give rise to claims of infringement of the patent rights of others.

We cannot assure you that any of our current or future AVISE® testing products will not infringe existing or future patents. Although we are not aware of any issued patents that will prevent us from marketing our AVISE® testing products, there may be third-party patents of which we are currently unaware with claims to materials or methods of manufacture related to the use or manufacture of our AVISE® testing products. If a third party that owns such a patent asserts it successfully against one of our current or future AVISE® testing products, we may be unable to market our product, which could materially harm our business and because patent applications can take many years to issue and may be confidential for 18 months or more after filing, there may be currently pending third-party patent applications which may later result in issued patents that our AVISE® testing products or our technologies may infringe, or which such third parties claim are infringed by the use of our technologies.

Parties making claims against us for infringement or misappropriation of their intellectual property rights may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop one or more of our AVISE® testing products. Defense of these claims, regardless of their merit, would involve substantial expenses and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees if we are found to be willfully infringing a third party's patents, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. We cannot predict whether any such license would be available at all or whether it would be available on commercially reasonable terms. Furthermore, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or development of our AVISE® testing products. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop our AVISE® testing products, which could harm our business significantly. Even if we were able to obtain a license, the rights may be nonexclusive, which may give our competitors access to the same intellectual property.

In addition to infringement claims against us, if third parties have prepared and filed patent applications in the United States that also claim technology to which we have rights, we may have to participate in interference proceedings in the USPTO to determine the priority of invention. Third parties may also attempt to initiate reexamination, post grant review or inter partes review of our patents in the USPTO. We may also become involved in similar proceedings in the patent offices in other jurisdictions regarding our intellectual property rights with respect to our AVISE® testing products and technology.

We may be involved in proceedings to protect or enforce our patents or the patents of our licensors, which could be expensive, time-consuming and unsuccessful.

Third parties may infringe, misappropriate or otherwise violate our existing patents, patents that may issue to us in the future, or the patents of our licensors that are licensed to us. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. We may not be able to prevent, alone or with our licensors, misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

In addition, if we or one of our licensors initiated legal proceedings against a third party to enforce a patent covering one of our AVISE® testing products, the defendant could counterclaim that the patent covering such AVISE® testing product is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Such proceedings could result in an invalidation of our patents. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our AVISE® testing products. Such a loss of patent protection could have a material adverse impact on our business.

Litigation proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

Because of the expense and uncertainty of litigation, we may not be in a position to enforce our intellectual property rights against third parties.

Because of the expense and uncertainty of litigation, we may conclude that even if a third party is infringing our patents or other intellectual property rights, the risk-adjusted cost of bringing and enforcing such a claim or action may be too high or not in the best interest of our company or our stockholders. We are not aware of any third party infringement of our intellectual property rights that would have a materially adverse impact on our business. In addition, there can be no assurance that our licensors will be willing to bring and enforce claims to prevent third parties from infringing intellectual property that is licensed to us, particularly if the affected intellectual property is less important to the licensor's business than to ours. In such cases, we may decide that the more prudent course of action is to simply monitor the situation or initiate or seek some other non-litigious action or solution.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other companies in our industry. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise improperly used or disclosed confidential information of these third parties or our employees' former employers. Further, we may be subject to ownership disputes in the future arising, for example, from conflicting obligations of consultants or others who are involved in developing our AVISE® testing products. We may also be subject to claims that former employees, collaborators or other third parties have an ownership interest in our patents or other intellectual property. Litigation may be necessary to defend against these and other claims challenging our right to and use of confidential and proprietary information. If we fail in defending any such claims, in addition to paying monetary damages, we may lose our rights therein. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees.

Risks Related to this Offering and Our Common Stock

An active, liquid and orderly market for our common stock may not develop, and you may not be able to resell your common stock at or above the public offering price. Our stock price may be volatile, and you may not be able to sell shares of our common stock at or above the price you paid.

Prior to this offering, there has been no public market for our common stock, and an active public market for our stock may not develop or be sustained after this offering. We and the representatives of the underwriters will determine the initial public offering price of our common stock through negotiation. This price will not necessarily reflect the price at which investors in the market will be willing to buy and sell our stock following this offering. In addition, the trading price of our common stock following this offering is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. These factors include:

- actual or anticipated variations in our and our competitors' financial condition and results of operations;
- announcements by us or our competitors of new products, strategic partnerships or capital commitments;
- changes in reimbursement by current or potential third-party payers;
- issuance of new securities analysts' reports or changed recommendations for our stock;
- actual or anticipated changes in regulatory oversight of our testing products;
- developments or disputes concerning our intellectual property or other proprietary rights;
- commencement of, or our involvement in, litigation;
- announced or completed acquisitions of businesses or technologies by us or our competitors;
- any major change in our management;
- changes in accounting principles;
- announcement or expectation of additional financing efforts;
- future sales of our common stock by our executive officers, directors and other stockholders; and
- general economic conditions and slow or negative growth of our markets.

In addition, the stock market in general, and the market for stock of life sciences companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors, as well as general economic, political and market conditions such as recessions or interest rate changes, may seriously affect the market price of our common stock, regardless of our actual operating performance. These fluctuations may be even more pronounced in the trading market for our stock shortly following this offering. If the market price of our common stock after this offering does not exceed the initial public offering price, you may not realize any return on your investment in us and may lose some or all of your investment.

In addition, in the past, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against these companies. This litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources. Any adverse determination in any such litigation or any amounts paid to settle any such actual or threatened litigation could require that we make significant payments.

Our failure to meet the continued listing requirements of the Nasdaq Global Market, or Nasdaq, could result in a delisting of our common stock.

If, after listing, we fail to satisfy the continued listing requirements of Nasdaq, such as the corporate governance requirements or the minimum closing bid price requirement, Nasdaq may take steps to delist our common stock. Such a delisting would likely have a negative effect on the price of our common stock and would impair your ability to sell or purchase our common stock when you wish to do so. In the event of a delisting, we can provide no assurance that any action taken by us to restore compliance with listing requirements would allow our common stock to become listed again, stabilize the market price or improve the liquidity of our common stock, prevent our common stock from dropping below the Nasdaq minimum bid price requirement or prevent future non-compliance with Nasdaq's listing requirements.

If securities or industry analysts issue an adverse opinion regarding our stock or do not publish research or reports about our company, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that equity research analysts publish about us and our business. Currently, we do not have any analyst coverage and we may not obtain analyst coverage in the future. In the event we obtain analyst coverage, we would not have any control over such analysts or the content and opinions included in their reports. Securities analysts may elect not to provide research coverage of our company after the completion of this offering, and such lack of research coverage may adversely affect the market price of our common stock. The price of our common stock could also decline if one or more equity research analysts downgrade our common stock or if those analysts issue other unfavorable commentary or cease publishing reports about us or our business. If one or more equity research analysts cease coverage of our company, we could lose visibility in the market, which in turn could cause our stock price to decline.

Future sales of shares by existing stockholders could cause our stock price to decline.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline. Based on the number of shares of common stock outstanding as of , 2018, upon the completion of this offering, we will have outstanding a total of shares of common stock, assuming the expected net exercise of the 2013 Warrants, no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options or warrants (other than the 2013 Warrants). Of these shares, will be freely tradable, without restriction, in the public market immediately after the offering. Each of our directors and officers and substantially all of our other stockholders has entered into a lock-up agreement with the underwriters described in "Underwriting" elsewhere in this prospectus, which restricts their ability to sell or transfer their shares. The lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus. The underwriters, however, may, in their sole discretion, waive the contractual lock-up prior to the expiration of the lock-up agreements. After the lock-up agreements expire, based on shares outstanding as of December 31, 2018, up to an additional shares of common stock will be eligible for sale in the public market, of which shares are held by directors, executive officers and other affiliates and will be subject to volume limitations under Rule 144 under the Securities Act.

In addition, shares of common stock that are subject to outstanding options as of December 31, 2018 will become eligible for sale in the public market to the extent permitted by the provisions of various option agreements, the lock-up agreements and Rules 144 and 701 under the Securities Act. We intend to file a registration statement on Form S-8 under the Securities Act covering all of the shares of common stock subject to options outstanding and reserved for issuance under our

employee benefit plans. This registration statement will become effective immediately upon filing, and shares covered by this registration statement will be eligible for sale in the public markets, subject to Rule 144 limitations applicable to affiliates, the terms of the applicable plan and the option agreements entered into with option holders, and any lock-up agreements described above. In addition, our directors and executive officers may establish programmed selling plans under Rule 10b5-1 of the Exchange Act for the purpose of effecting sales of our common stock. Any sales of securities by these stockholders, or the perception that those sales may occur, including the entry into such programmed selling plans, could have a material adverse effect on the trading price of our common stock.

In addition, the holders of shares of common stock and holders of warrants to purchase an aggregate of shares of common stock will be entitled to rights with respect to registration of such shares under the Securities Act pursuant to an investors' rights agreement between such holders and us. See "Certain Relationships and Related Person Transactions—Investors' Rights Agreement" below. If such holders, by exercising their registration rights, sell a large number of shares, they could adversely affect the market price for our common stock. If we file a registration statement for the purpose of selling additional shares to raise capital and are required to include shares held by these holders pursuant to the exercise of their registration rights, our ability to raise capital may be impaired.

We are an emerging growth company and a smaller reporting company, and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our common stock less attractive to investors.

We are an emerging growth company, as defined in the JOBS Act, and may remain an emerging growth company until the last day of the fiscal year following the fifth anniversary of the completion of this offering. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer," our annual gross revenue exceeds $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's discussion and analysis of financial condition and results of operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We have taken advantage of reduced reporting burdens in this prospectus. In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation related information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there

may be a less active trading market for our common stock and our stock price may be reduced or more volatile. In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of these accounting standards until they would otherwise apply to private companies. We have elected to avail ourselves of this exemption and, therefore, we may not be subject to the same implementation timing for new or revised accounting standards as other public companies that are not emerging growth companies, which may make comparison of our financials to those of other public companies more difficult.

We are also a "smaller reporting company" as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than $100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

We will incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to the reporting requirements of the Exchange Act, which will require, among other things, that we file with the SEC annual, quarterly and current reports with respect to our business and financial condition. In addition, Sarbanes-Oxley, as well as rules subsequently adopted by the Securities and Exchange Commission, or the SEC, and Nasdaq to implement provisions of Sarbanes-Oxley, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, the SEC has adopted additional rules and regulations in these areas, such as mandatory "say on pay" voting requirements that will apply to us when we cease to be an emerging growth company. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our testing products or services. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

If we fail to maintain proper and effective internal control over financial reporting, our ability to produce accurate and timely financial statements could be impaired, investors may lose confidence in our financial reporting and the trading price of our common stock may decline.

Pursuant to Section 404 of Sarbanes-Oxley, our management will be required to report upon the effectiveness of our internal control over financial reporting beginning with the annual report for our fiscal year ending December 31, 2019. When we lose our status as an "emerging growth company" and reach an accelerated filer threshold, our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. To comply with the requirements of being a reporting company under the Exchange Act, we will need to upgrade our information technology systems; implement additional financial and management controls, reporting systems and procedures; and hire additional accounting and finance staff. If we or, if required, our auditors are unable to conclude that our internal control over financial reporting is effective, investors may lose confidence in our financial reporting and the trading price of our common stock may decline.

We cannot assure you that there will not be material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations or cash flows. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting once that firm begin its Section 404 reviews, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect immediately prior to the consummation of this offering will contain provisions that could significantly reduce the value of our shares to a potential acquiror or delay or prevent changes in control or changes in our management without the consent of our board of directors. The provisions in our charter documents will include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors, unless the board of directors grants such right to the stockholders, to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- the required approval of at least 66-2/3% of the shares entitled to vote to remove a director for cause, and the prohibition on removal of directors without cause;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting

rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;

- the ability of our board of directors to alter our amended and restated bylaws without obtaining stockholder approval;
- the required approval of at least 66-2/3% of the shares entitled to vote to adopt, amend or repeal our amended and restated bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- an exclusive forum provision providing that the Court of Chancery of the State of Delaware will be the exclusive forum for certain actions and proceedings;
- the requirement that a special meeting of stockholders may be called only by the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

We are also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction.

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine; provided, that, this provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, our amended and restated certificate of incorporation will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. By agreeing to this provision, however, the stockholders will not be deemed to have waived our compliance with the Federal Securities laws and rules and regulations thereunder. Furthermore, the enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. If a court were to find the choice of forum provisions in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

We have broad discretion to use the net proceeds from this offering and our investment of these proceeds may not yield a favorable return. We may allocate the net proceeds from this offering in ways that you and other stockholders may not approve.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section titled "Use of Proceeds." Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment, and the failure by our management to apply these funds effectively could harm our business. We may also use a portion of the net proceeds of this offering for acquisitions to bolster our product offerings. We have not entered into any agreements or commitments with respect to any specific acquisitions and have no understandings or agreements with respect to any such acquisition or investment at this time. Pending their use, we may invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected results, which could cause our stock price to decline.

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment.

The initial public offering price of our common stock is substantially higher than the net tangible book value per share of our common stock immediately after this offering. Therefore, if you purchase our common stock in this offering, you will incur immediate dilution of $ in the net tangible book value per share from the price you paid, based on the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus. In addition, new investors who purchase shares in this offering will contribute approximately % of the total amount of equity capital raised by us through the date of this offering, but will only own approximately % of the outstanding equity capital. The exercise of outstanding options and warrants will result in further dilution. In addition, if we raise additional funds by issuing equity securities, our stockholders may experience further dilution. For a detailed description of the dilution that you will experience immediately after this offering, see "Dilution."

After this offering, our executive officers, directors and principal stockholders, if they choose to act together, will continue to have the ability to control or significantly influence all matters submitted to stockholders for approval.

Following the completion of this offering, our executive officers, directors and greater than 5% stockholders, in the aggregate, will own approximately % of our outstanding common stock (assuming no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options). As a result, such persons, acting together, will have the ability to control or significantly influence all matters submitted to our stockholders for approval, including the election and removal of directors and approval of any significant transaction, as well as our management and business affairs. This concentration of ownership may have the effect of delaying, deferring or preventing a change in control, impeding a merger, consolidation, takeover or other business combination involving us, or discouraging a potential acquiror from making a tender offer or otherwise attempting to obtain control of our business, even if such a transaction would benefit other stockholders.

We have never paid dividends on our capital stock, and we do not anticipate paying dividends in the foreseeable future. Your ability to achieve a return on your investment will depend on appreciation, if any, in the price of our common stock.

We have never declared or paid any cash dividends on our common stock and do not intend to pay any cash dividends in the foreseeable future. We currently intend to retain any future earnings to fund the growth of our business. In addition, our loan agreement restricts our ability to pay cash dividends on our common stock and we may also enter into credit agreements or other borrowing arrangements in the future that will restrict our ability to declare or pay cash dividends on our common stock. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant. As a result, capital appreciation, if any, of our common stock will be the sole source of gain for the foreseeable future.

If an active, liquid trading market for our common stock does not develop, you may not be able to sell your shares quickly or at or above the initial offering price.

There has not been a public market for our common stock. An active and liquid trading market for our common stock may not develop or be sustained following this offering. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of your shares. An inactive market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration. You may not be able to sell your shares quickly or at or above the initial offering price. The initial public offering price will be determined by negotiations with the representatives of the underwriters. This price may not be indicative of the price at which our common stock will trade after this offering, and our common stock could trade below the initial public offering price.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because pharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management’s attention and resources, which could harm our business.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, current and future product offerings, reimbursement and coverage, our ability to implement an integrated testing with therapeutics strategy, the expected benefits from our partnership or promotion arrangements with third parties, research and development costs, timing and likelihood of success and plans and objectives of management for future operations, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar expressions. The forward-looking statements in this prospectus are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described under the sections in this prospectus entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this prospectus. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by applicable law, we undertake no obligation to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. The forward-looking statements contained in this prospectus are excluded from the safe harbor protection provided by the Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See “Where You Can Find More Information.”

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to rely unduly upon these statements.

MARKET AND INDUSTRY DATA

We obtained the industry, market and competitive position data used throughout this prospectus from our own internal estimates and research, as well as from independent market research, industry and general publications and surveys, governmental agencies and publicly available information in addition to research, surveys and studies conducted by third parties. Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of our industry and market, which we believe to be reasonable. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires. In addition, while we believe the industry, market and competitive position data included in this prospectus is reliable and based on reasonable assumptions, such data involves risks and uncertainties and is subject to change based on various factors, including those discussed in “Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties or by us.

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of the common stock that we are offering will be approximately $ million (or $ million if the underwriters exercise their option to purchase additional shares in full), assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million in the number of shares offered by us at the assumed initial public offering price would increase (decrease) the net proceeds to us from this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, by approximately $ million.

The principal purposes of this offering are to obtain additional capital to support our operations, to create a public market for our common stock and to facilitate our future access to the public equity markets.

We currently intend to use the net proceeds from this offering, together with our existing cash and cash equivalents as of December 31, 2018, for working capital purposes and other general corporate purposes, including for selling and marketing activities, research and development activities and capital expenditures. We may also use a portion of the net proceeds and our existing cash and cash equivalents, to in-license, acquire, or invest in complementary businesses, technologies, products or assets. However, we have no current commitments or obligations to do so.

We believe, based on our current operating plan, that the net proceeds from this offering and our existing cash and cash equivalents and anticipated future product revenue, will be sufficient to fund our operations for at least the next 12 months, although there can be no assurance in that regard. The amounts and timing of our actual expenditures will depend on numerous factors, including the timing and amount of our cash receipts from the sale of our testing products and promotion of SIMPONI®, the development efforts for our testing products and other factors described under “Risk Factors” in this prospectus, as well as the amount of cash used in our operations. Therefore, our actual expenditures may differ materially from the estimates described above. We may find it necessary or advisable to use the net proceeds for other purposes, and we will have broad discretion in the application of the net proceeds.

Pending the uses described above, we plan to invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We intend to retain future earnings, if any, to finance the operation of our business and do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to dividend policy will be made at the discretion of our board of directors after considering our financial condition, results of operations, capital requirements, business prospects and other factors the board of directors deems relevant, and subject to the restrictions contained in any future financing instruments. In addition, our ability to pay cash dividends is currently prohibited by the terms of our loan agreement.

CAPITALIZATION

The following table sets forth our cash and cash equivalents, and our capitalization as of December 31, 2018 as follows:

- on an actual basis;
- on a pro forma basis to reflect (i) the issuance of 88,030,905 shares of our Series G redeemable convertible preferred stock in January 2019 and the receipt of $ million in net proceeds therefrom, (ii) the automatic conversion of all outstanding shares of our redeemable convertible preferred stock into an aggregate of 1,043,474,958 shares of our common stock (including the conversion of 88,030,905 shares of our Series G redeemable convertible preferred stock issued in January 2019) and the resultant reclassification of (A) the carrying value of the redeemable convertible preferred stock to permanent equity and (B) our redeemable convertible preferred stock warrant liabilities to additional paid-in capital, a component of stockholder's equity (deficit), in connection with such conversion, all of which will occur in connection with the completion of this offering, (iii) the issuance of shares of our common stock as a result of the expected net exercise of the 2013 Warrants in connection with the completion of this offering, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, which 2013 Warrants will terminate if not exercised prior to the completion of this offering and (iv) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the completion of this offering; and
- on a pro forma as adjusted basis to give further effect to the issuance and sale of shares of our common stock in this offering at the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma and pro forma as adjusted information below is illustrative only, and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this information in conjunction with our audited financial statements and the related notes included elsewhere in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and other financial information contained in this prospectus.

	As of December 31, 2018		
	Actual	Pro Forma	Pro Forma As Adjusted(1)
	(in thousands, except share data)		
Cash and cash equivalents	$	$	$
Redeemable convertible preferred stock warrant liabilities	$	$	$
Borrowings, including current portion, net of discounts and debt issuance costs			
Capital lease obligations, including current portion			
Redeemable convertible preferred stock, $0.001 par value per share; 750,300,000 shares authorized; shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted			
Stockholders' equity (deficit):			
Preferred stock, $0.001 par value per share; no shares authorized, issued or outstanding, actual; 10,000,000 shares authorized and no shares issued or outstanding, pro forma and pro forma as adjusted			
Common stock, $0.001 par value per share; 1,470,000,000 shares authorized; shares issued and outstanding, actual; shares authorized, pro forma and pro forma as adjusted; shares issued and outstanding, pro forma; shares issued and outstanding, pro forma as adjusted			
Additional paid-in capital			
Accumulated deficit			
Total stockholders' equity (deficit)			
Total capitalization	$	$	$

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, total stockholders' equity (deficit) and total capitalization by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million in the number of shares offered by us at the assumed initial public offering price per share would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, total stockholders' equity (deficit) and total capitalization by approximately $, after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us.

The number of shares in the table above excludes:

- 121,423,047 shares of our common stock issuable upon exercise of stock options outstanding as of December 31, 2018, with a weighted-average exercise price of $0.007 per share;
- shares of our common stock issuable upon the exercise of outstanding warrants (which number does not include the 2013 Warrants) as of December 31, 2018, with a weighted-average exercise price of $ per share;

- shares of our common stock reserved for future issuance under our 2019 Plan, which will become effective on the day prior to the public trading date of our common stock (which number does not include any potential evergreen increases pursuant to the terms of the 2019 Plan); and
- shares of our common stock reserved for future issuance under our ESPP, which will become effective on the day prior to the public trading date of our common stock (which number does not include any potential evergreen increases pursuant to the terms of the ESPP).

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the assumed initial public offering price per share and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

As of December 31, 2018, we had a historical net tangible book deficit of $ million, or $ per share of common stock based on 1,055,052,879 shares of common stock outstanding as of such date. Our historical net tangible book deficit per share represents total tangible assets less total liabilities and redeemable convertible preferred stock, divided by the number of shares of common stock outstanding at December 31, 2018.

On a pro forma basis after giving effect to (i) the issuance of 88,030,905 shares of our Series G redeemable convertible preferred stock in January 2019 and the receipt of $ in net proceeds therefrom, (ii) the automatic conversion of all outstanding shares of our redeemable convertible preferred stock into an aggregate of 1,043,474,958 shares of our common stock, (including the conversion of 88,030,905 shares of our Series G redeemable convertible preferred stock issued in January 2019), and the resultant reclassification of (A) the carrying value of the redeemable convertible preferred stock to permanent equity and (B) our redeemable convertible preferred stock warrant liabilities to additional paid-in capital, a component of stockholders' equity (deficit), in connection with such conversion, all of which will occur in connection with the completion of this offering, and (iii) the issuance of shares of our common stock as a result of the expected net exercise of the 2013 Warrants in connection with the completion of this offering, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, which 2013 Warrants will terminate if not exercised prior to the completion of this offering, our pro forma net tangible book value (deficit) as of December 31, 2018 would have been approximately $ million, or approximately $ per share of common stock.

After giving further effect to the issuance and sale of shares of our common stock that we are offering at the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2018 would have been approximately $ million, or approximately $ per share. This amount represents an immediate increase in pro forma net tangible book value of approximately $ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately $ per share to new investors purchasing shares of common stock in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from assumed initial public offering price per share paid by new investors. The following table illustrates this dilution:

Assumed initial public offering price per share		$
Historical net tangible book deficit per share as of December 31, 2018	$	
Pro forma increase in historical net tangible book value per share attributable to the pro forma transactions described above		
Pro forma net tangible book value per share as of December 31, 2018		
Increase in pro forma net tangible book value per share attributable to this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new investors in this offering		$

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering by approximately $, and dilution in pro forma net tangible book value per share to new investors by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million in the number of shares offered by us at the assumed initial public offering price would increase (decrease) our pro forma as adjusted net tangible book value per share after this offering by approximately $ and decrease (increase) the dilution to investors participating in this offering by approximately $ per share, after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares in full in this offering, the pro forma as adjusted net tangible book value after the offering would be approximately $ per share, the increase in pro forma net tangible book value per share to existing stockholders would be approximately $ per share and the dilution per share to new investors would be approximately $ per share, in each case assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus.

The following table summarizes on the pro forma as adjusted basis described above, as of December 31, 2018, the differences between the number of shares purchased from us, the total consideration paid to us in cash and the weighted-average price per share paid by existing stockholders for shares issued prior to this offering and the price to be paid by new investors in this offering. The calculations below are based on the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of the prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders before this offering		%	$	%	$
New investors participating in this offering					$
Total		100%	$	100%	

The foregoing tables and calculations (other than the historical net tangible book value calculation) are based on shares of our common stock outstanding as of December 31, 2018, after giving effect to the automatic conversion of all outstanding shares of our redeemable convertible preferred stock into 1,043,474,958 shares of our common stock (including the conversion of 88,030,905 shares of our Series G redeemable convertible preferred stock issued in January 2019) and the issuance of shares of our common stock as a result of the expected net exercise of the 2013 Warrants in connection with the completion of this offering, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, which 2013 Warrants will terminate if not exercised prior to the completion of this offering, and excludes:

- 121,423,047 shares of our common stock issuable upon exercise of stock options outstanding as of December 31, 2018, with a weighted-average exercise price of $0.007 per share;
- shares of our common stock issuable upon the exercise of outstanding warrants (which number does not include the 2013 Warrants) as of December 31, 2018, with a weighted-average exercise price of $ per share;

- shares of our common stock reserved for future issuance under our 2019 Plan, which will become effective on the day prior to the public trading date of our common stock (which number does not include any potential evergreen increases pursuant to the terms of the 2019 Plan); and
- shares of our common stock reserved for future issuance under our ESPP, which will become effective on the day prior to the public trading date of our common stock (which number does not include any potential evergreen increases pursuant to the terms of the ESPP).

To the extent any outstanding options or warrants are exercised, there will be further dilution to new investors. If all of such outstanding options and warrants had been exercised as of December 31, 2018, the pro forma as adjusted net tangible book value per share after this offering would be $, and total dilution per share to new investors would be $.

If the underwriters exercise their option to purchase additional shares of our common stock in full:

- the percentage of shares of common stock held by existing stockholders will decrease to approximately % of the total number of shares of our common stock outstanding after this offering; and
- the number of shares held by new investors will increase to , or approximately % of the total number of shares of our common stock outstanding after this offering.

SELECTED FINANCIAL DATA

The following tables set forth our selected historical financial data as of, and for the periods ended on, the dates indicated. We have derived the selected statements of operations data for the years ended December 31, 2017 and 2018 and the balance sheet data as of December 31, 2017 and 2018 from our audited financial statements included elsewhere in this prospectus. You should read this data together with our audited financial statements and the related notes included elsewhere in this prospectus and the section of this prospectus entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations." Our historical results for any prior period are not necessarily indicative of our future results.

	Year Ended December 31,	
	2017	2018
	(in thousands, except share and per share data)	
Statements of Operations Data:		
Revenue	$ 26,807	$
Operating expenses:		
Costs of revenue (excluding amortization of purchased technology)	14,137	
Selling, general and administrative expenses	18,820	
Research and development expenses	1,551	
Amortization of intangible assets	186	
Change in fair value of acquisition-related liabilities	(51)	
Total operating expenses	34,643	
Loss from operations	(7,836)	
Interest expense	(2,948)	
Loss on extinguishment of share purchase rights and 2013 Term Loan	(6,050)	
Change in fair value of financial instruments	(9,391)	
Other income, net	45	
Loss before income taxes	(26,180)	
Income tax benefit	549	
Net loss	(25,631)	
Accretion of redeemable convertible preferred stock	(5,353)	
Deemed dividend recorded in connection with financing transactions	(1,790)	
Net loss attributable to common stockholders	$ (32,774)	$
Net loss per share attributable to common stockholders, basic and diluted(1)	$ (2.83)	$
Weighted-average number of shares used to compute net loss per share attributable to common stockholders, basic and diluted(1)	11,577,921	
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)(1)		$
Pro forma weighted-average number of shares used to compute pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)(1)		

(1) See Note 2 to our audited financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the historical net loss and the historical and pro forma net loss per share attributable to common stockholders, basic and diluted, and the number of shares used in the computation of these per share amounts.

	As of December 31,	
	2017	2018
	(in thousands)	
Balance Sheet Data:		
Cash and cash equivalents	$ 11,241	$
Working capital(1)	8,270	
Total assets	20,390	
Borrowings, non-current portion, net of discounts and debt issuance costs	18,809	
Redeemable convertible preferred stock warrant liabilities	896	
Capital lease obligations, long-term	81	
Redeemable convertible preferred stock	92,046	
Total stockholders' equity (deficit)	(96,684)	

(1) We define working capital as current assets less current liabilities. See our audited financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our audited financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and future financial performance, includes forward-looking statements that are based on current beliefs, plans and expectations and involve risks, uncertainties and assumptions. You should review the "Risk Factors" section of this prospectus for a discussion of important factors that could cause our actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis. Please also see the section of this prospectus entitled "Special Note Regarding Forward-Looking Statements."

Overview

We are dedicated to transforming the care continuum for patients suffering from debilitating and chronic autoimmune diseases by enabling timely differential diagnosis and optimizing therapeutic intervention. We have developed and are commercializing a portfolio of innovative testing products under our AVISE® brand, several of which are based on our proprietary CB-CAPs technology. Our goal is to enable rheumatologists to improve care for patients through the differential diagnosis, prognosis and monitoring of complex autoimmune and autoimmune-related diseases, including SLE and RA. Our strategy includes leveraging our portfolio of testing products to market therapeutics through our sales channel, targeting the approximately 5,000 rheumatologists across the United States. Our business model of integrating testing products and therapeutics positions us to offer targeted solutions to rheumatologists and, ultimately, better serve patients.

We currently market nine testing products under our AVISE® brand that allow for the differential diagnosis, prognosis and monitoring of complex autoimmune and autoimmune-related diseases. Our lead testing product, AVISE® CTD, enables differential diagnosis for patients presenting with symptoms indicative of a wide variety of CTDs and other related diseases with overlapping symptoms. We commercially launched AVISE® CTD in 2012 and revenue from this product comprised 85% of our revenue in the year ended December 31, 2018. There is an unmet need for rheumatologists to add clarity in their CTD clinical evaluation, and we believe there is a significant opportunity for our tests that enable the differential diagnosis of these diseases, particularly for potentially life-threatening diseases such as SLE. In order to advance our integrated testing and therapeutics strategy, in December 2018 we entered into the Janssen agreement to exclusively promote SIMPONI® in the United States for the treatment of adult patients with moderate to severe RA and for other indicated rheumatic diseases. To support the co-promotion of SIMPONI®, we are in the process of expanding our salesforce from 31 representatives as of December 31, 2018 to up to 60 representatives by the end of the first quarter of 2019. We also have additional agreements with other leading pharmaceutical companies, including GSK and Horizon Pharma that leverage our testing products and the information generated from such tests. We plan to pursue additional strategic partnerships with a focus on the commercialization of therapeutics that are synergistic with our testing products.

We perform all of our AVISE® tests in our approximately 8,000 square foot clinical laboratory, which is certified by CLIA and accredited by CAP, and located in Vista, California. Our laboratory is certified for performance of high-complexity testing by CMS in accordance with CLIA. We are approved to offer our products in all 50 states. Our clinical laboratory reports all AVISE® testing product results within five business days.

We market our AVISE® testing products using our specialized salesforce. Unlike many diagnostic salesforces that are trained only to understand the comparative benefits of their tests, our salesforce

coupled with our comprehensive training enables our sales representatives to interpret results from our de-identified patient test reports and provide unique insights in a highly tailored discussion with rheumatologists. Our integrated testing and therapeutics strategy results in a unique opportunity to promote and sell targeted therapies in patient focused sales calls with rheumatologists, including those with whom we have a longstanding relationship and history using our portfolio of testing products.

Reimbursement for our testing services comes from several sources, including commercial third-party payers, such as insurance companies and health maintenance organizations, government payers, such as Medicare, and patients. Reimbursement rates vary by product and payer. We continue to focus on expanding coverage among existing contracted rheumatologists and to achieve coverage with commercial payers, laboratory benefit managers and evidence review organizations.

Since inception we have devoted substantially all our efforts developing and marketing products for the diagnosis, prognosis and monitoring of autoimmune diseases. Although our revenue has increased sequentially year over year, we have never been profitable and, as of December 31, 2018 we had an accumulated deficit of $ million. We incurred net losses of $25.6 million and $ million in the years ended December 31, 2017 and 2018, respectively. We expect to continue to incur operating losses in the near term as our operating expenses will increase to support the growth of our business, as well as additional costs associated with being a public company. We have funded our operations primarily through equity and debt financings and revenue from sales of our products. Since inception and through December 31, 2018, our operations have been financed primarily by net proceeds of approximately $149.5 million from sales of our common and redeemable convertible preferred stock and borrowings under various debt financings and revenue from the sales of our products. As of December 31, 2018, we had $ million of cash and cash equivalents. In addition, in January 2019, we raised gross proceeds of approximately $6.9 million through the sale of our Series G redeemable convertible preferred stock (of which $3.75 million was included in cash and cash equivalents and recorded as a liability as of December 31, 2018).

Factors Affecting Our Performance

We believe there are several important factors that have impacted, and that we expect will impact, our operating performance and results of operations, including:

- ***Continued Adoption Of Our Testing Products.*** Since its launch in 2012, we have grown the number of our AVISE® CTD tests performed at a compound annual growth rate of 87%, with limited incremental investment in our commercial infrastructure. Over 83,000 AVISE® CTD tests were performed in 2018, representing 18% growth over 2017, and the number of ordering physicians reached 1,298 in the fourth quarter of 2018, representing 18% growth over the same quarter in 2017. More than 280,000 AVISE® CTD tests have been processed since launch, and in the fourth quarter of 2018, we achieved a record number of 512 adopting physicians (defined as those who had previously prescribed at least 11 tests in a quarter) compared to 401 in the same quarter in 2017. Revenue growth for our testing products will depend on our ability to continue to expand our base of ordering physicians and increase our penetration with existing physicians.
- ***Reimbursement For Our Testing Products***. Our revenue depends on achieving broad coverage and reimbursement for our tests from third-party payers, including both commercial and government payers such as Medicare. Payment from third-party payers differs depending on whether we have entered into a contract with the payers as a “participating provider” or do not have a contract and are considered a “non-participating provider.” Payers will often reimburse non-participating providers, if at all, at a lower amount than participating providers. We have received a substantial portion of our revenue from a limited number of third-party commercial payers, most of which have not contracted with us to be a participating provider. Historically, we have experienced situations where commercial payers proactively reduced the

amounts they were willing to reimburse for our tests, and in other situations, commercial payers have determined that the amounts they previously paid were too high and have sought to recover those perceived excess payments by deducting such amounts from payments otherwise being made. When we contract to serve as a participating provider, reimbursements are made pursuant to a negotiated fee schedule and are limited to only covered indications. If we are not able to obtain or maintain coverage and adequate reimbursement from third-party payers, we may not be able to effectively increase our testing volume and revenue as expected. Additionally, retrospective reimbursement adjustments can negatively impact our revenue and cause our financial results to fluctuate.

- ***Promotion of SIMPONI®***. We only recently began promoting SIMPONI® in the United States under the Janssen agreement. We may encounter difficulties in successfully promoting SIMPONI® and generating significant revenue under the agreement. Our ability to effectively promote SIMPONI® will require us to be successful in a range of activities, including hiring, training and deploying additional sales representatives and creating demand for SIMPONI® through our own sales activities as well as those of Janssen. In addition, it may take longer to hire additional sales representatives and to generate meaningful revenue than we currently expect, which would cause us to continue to rely on our existing testing products to drive revenue growth.
- ***Development of Additional Testing Products.*** We rely on sales of our AVISE® CTD test to generate the significant majority of our revenue. We recently launched AVISE® Anti-CarP and AVISE® PC4d. We expect to continue to invest in research and development in order to develop additional testing products and expect these costs to increase. Our success in developing new testing products will be important in our efforts to grow our business by expanding the potential market for our testing products and diversifying our sources of revenue.
- ***Margin Expansion***. We believe growth in our promotion of therapeutics will meaningfully improve our margin profile and further support our goal of achieving profitability. We also expect an increase to our gross margins in January 2020 onwards upon the expiration of a 10% annual royalty on our CB-CAPs technology. In addition, we believe we are well positioned to drive further margin expansion through a continued focus on increasing operating leverage through the implementation of certain internal initiatives, such as conducting additional validation and reimbursement oriented clinical studies to facilitate payer coverage of our testing products, capitalizing on our growing reagent purchasing to negotiate improved volume-based pricing and automation in our clinical laboratory to reduce material and labor costs. However, these potential margin increases may be partially offset by expected decreases in Medicare reimbursement rates as a result of PAMA.
- ***Timing of Our Research and Development Expenses***. Our spending on experiments and clinical studies may vary substantially from quarter to quarter. We also expend funds to secure clinical samples that can be used in discovery, product development, clinical validation, utility and outcome studies. The timing of these research and development activities is difficult to predict. If a substantial number of clinical samples are obtained in a given quarter or if a high-cost experiment is conducted in one quarter versus the next, the timing of these expenses will affect our financial results. We conduct clinical studies to validate our new testing products, as well as ongoing clinical and outcome studies to further expand the published evidence to support our commercialized AVISE® testing products. Spending on research and development for both experiments and studies may vary significantly by quarter depending on the timing of these various expenses.
- ***How We Recognize Revenue***. Through December 31, 2017, we recognized revenue related to billings to payers on an accrual basis, net of contractual adjustments, only when we had established pricing with our payers as indicated by contractual pricing arrangements or when we had been able to demonstrate that a predictable pattern of payment for our services exists.

For the year ended December 31, 2017, revenue was recognized on an accrual basis for one payer, Medicare, and totaled $8.2 million. In the absence of a predictable pattern of reimbursement or a contract with a payer, revenue was recognized upon cash receipt. Effective January 1, 2018, we began recognizing revenue in accordance with the provisions of Accounting Standards Codification, or ASC, Topic 606, *Revenue from Contracts with Customers.* We record revenue on an accrual basis based on our estimate of the amount that will be ultimately realized for each test upon delivery based on a historical analysis of amounts collected by test and by payer. Changes to such estimates may increase or decrease revenue recognized in future periods.

While each of these areas present significant opportunities for us, they also pose significant risks and challenges that we must address. We discuss many of these risks, uncertainties and other factors in the section entitled “Risk Factors.”

Janssen Promotion Agreement

In December 2018, we entered into a co-promotion agreement with Janssen, under which we are responsible for the costs associated with our sales force in promoting SIMPONI® in the United States. Janssen is responsible for all other costs associated with our promotion of SIMPONI® under the Janssen agreement. In exchange for our sales and co-promotional services, we are entitled to a quarterly co-promotion fee based on any increase in total prescribed units of SIMPONI® for that quarter over a predetermined baseline. The promotion fee is determined on a sliding rate, ranging from the high hundreds of dollars to the low one thousands per prescribed unit of SIMPONI® depending on the number of increased prescriptions, and varies per increased prescription. The term of the agreement expires on June 30, 2020, unless extended by us for an additional 18 months upon 180 days written notice prior to the end of the initial term. Janssen can terminate the agreement at any time for any reason upon 30 days’ notice to us, and we can terminate the agreement for any reason at the end of any calendar quarter upon 30 days’ notice to Janssen. Either party may terminate the agreement in the event of the other party’s default of any of its material obligations under the agreement if such default remains uncured for a specified period of time following receipt of written notice of such default

We expect to begin recognizing revenue in the first half of 2019 based on our estimate of the number of increased prescriptions in accordance with the agreement.

Financial Overview

Revenue

To date, we have derived our revenue from the sale of our testing products, most of which is attributable to our AVISE® CTD test. We primarily market our testing products to rheumatologists in the United States. The rheumatologists who order our testing products and to whom results are reported are generally not responsible for payment for these products. The parties that pay for these services, or payers, consist of commercial third-party payers, Medicare and other government payers, and patients. Our service is completed upon the delivery of test results to the prescribing rheumatologists which triggers billing for the service.

Through December 31, 2017, we recognized revenue related to billings to payers on an accrual basis, net of contractual adjustments, only when we had established pricing with our payers as indicated by contractual pricing arrangements or when we had been able to demonstrate that a predictable pattern of payment for our services exists. For the year ended December 31, 2017, revenue was recognized on an accrual basis for one payer, Medicare, and totaled $8.2 million. In the absence of a predictable pattern of reimbursement or a contract with a payer, revenue was recognized upon cash receipt.

Effective January 1, 2018, we began recognizing revenue in accordance with the provisions of ASC Topic 606, *Revenue from Contracts with Customers.* We record revenue on an accrual basis based on our estimate of the amount that will be ultimately realized for each test upon delivery based on a historical analysis of amounts collected by test and by payer. These assessments require significant judgment by management.

Our ability to increase our revenue will depend on our ability to further penetrate the market for our current and future testing products, and increase our reimbursement and collection rates for tests performed, as well as our ability to successfully promote SIMPONI®.

Operating Expenses

Costs of Revenue (Excluding Amortization of Intangible Assets)

Costs of revenue represents the expenses associated with obtaining and testing patient specimens. The components of our costs of revenue include materials costs, direct labor, equipment and infrastructure expenses associated with testing specimens, shipping charges to transport specimens, blood specimen collections fees, royalties, depreciation and allocated overhead, including rent and utilities.

Each payer, commercial third-party, government, or individual, reimburses us at different amounts. These differences can be significant. As a result, our costs of revenue as a percentage of revenue may vary significantly from period to period due to the composition of payers for each month's billings.

We expect that our costs of revenue will increase in absolute dollars as the number of tests we perform increases. However, we expect that the cost per test will decrease over time due to volume discounts on materials and shipping costs and other volume efficiencies we may gain as the number of tests we perform increases.

Selling, General and Administrative Expenses

Selling, general and administrative expenses consist of personnel costs, including stock-based compensation expense, direct marketing expenses, accounting and legal expenses, consulting costs, and allocated overhead including rent, information technology, depreciation and utilities.

We expect that our selling, general and administrative expenses will increase in absolute dollars as we expand our sales and sales support functions, including expansion activities related to our promotion of SIMPONI®. We also expect our selling, general and administrative expenses will increase because of operating as a public company, including expenses related to compliance with the rules and regulations of the SEC and Nasdaq, additional insurance, investor relations activities and other administrative and professional services such as accounting, legal, regulatory and tax.

Research and Development Expenses

Research and development expenses include costs incurred to develop our technology, testing products and product candidates, collect clinical specimens and conduct clinical studies to develop and support our testing products and product candidates. These costs consist of personnel costs, including stock-based compensation expense, materials, laboratory supplies, consulting costs, costs associated with setting up and conducting clinical studies and allocated overhead including rent and utilities. We expense all research and development costs in the periods in which they are incurred.

We expect that our research and development expenses will increase in absolute dollars as we continue to invest in research and development activities related to our existing testing products and product candidates.

Amortization of Intangible Assets

Amortization of intangible assets represents the total amortization expense for our purchased technologies.

The intangible assets recorded as of December 31, 2017 became fully amortized in 2018; accordingly, we do not expect any future amortization expense related to these assets.

Change in Fair Value of Acquisition-Related Liabilities

In connection with the acquisition of the medical diagnostics division of Cypress Bioscience, Inc., or Cypress, in 2010, we were assigned certain agreements with Royalty Pharma. We initially agreed to pay an additional amount not to exceed $9.0 million in the event specified revenue, contractual and product launch milestones were achieved. In February 2017, we amended two of the remaining agreements for which a contingent payment amount had been originally agreed to.

We do not expect any further fair value adjustments for these acquisition-related liabilities as the one remaining milestone is not expected to be achieved.

Interest Expense

Interest expense consists of cash and non-cash interest expense associated with our financing arrangements, including the borrowings under our current loan agreement with Innovatus and our prior term loan agreement, or the 2013 Term Loan, with Capital Royalty Partners II, L.P. and its affiliates, collectively referred to as Capital Royalty, which was repaid in September 2017.

We expect interest expense to increase in 2019 due to the draws we made under our loan agreement and to decrease in years thereafter due to lower interest rates and lower outstanding principal balances.

Loss on Extinguishment of Share Purchase Rights and 2013 Term Loan

In 2016 and 2017, we entered into agreements with existing stockholders of our redeemable convertible preferred stock that contained future purchase obligations that were required to be accounted for as liabilities and remeasured to fair value at each reporting date, with any change in the fair value reported as a component of other income (expense). In May 2017, we completed the first closing of the sale of our Series F redeemable convertible preferred stock which resulted in the conversion of all outstanding share purchase rights. We remeasured the share purchase right liabilities to fair value on the date of conversion and the difference between the fair value of the shares of Series F redeemable convertible preferred stock received and the sum of the cash proceeds received and the fair value of the outstanding share purchase and tranche participation rights resulted in the recognition of a loss on extinguishment of the outstanding share purchase rights.

In September 2017, we repaid our 2013 Term Loan with Capital Royalty and incurred a loss on the extinguishment of debt related to the unamortized portion of the of the placement fees and the capitalized value of the warrants associated with the notes.

We did not have any similar transactions in 2018 and accordingly, there were no similar charges in 2018.

Change in Fair Value of Financial Instruments

As discussed above, we remeasured the share purchase right liabilities to fair value on the date of the conversion to shares of Series F redeemable convertible preferred stock and reclassified the liabilities to permanent equity.

In addition, we classify our outstanding warrants to purchase shares of our redeemable convertible preferred stock as liabilities on our balance sheets at their estimated fair value since the underlying redeemable convertible preferred stock was classified as temporary equity. At the end of each reporting period, changes in the estimated fair value during the period are recorded as a component of other income (expense).

The outstanding warrants to purchase shares of our Series D and E redeemable convertible preferred stock will terminate if not exercised prior to the completion of this offering and will no longer be subject to measurement once exercised or terminated. The outstanding warrants to purchase shares of our Series F redeemable convertible preferred stock will convert into warrants to purchase shares of our common stock in connection with the completion of this offering and will no longer be subject to measurement.

Other Income, Net

Other income, net, consists primarily of interest income earned on our cash and cash equivalents.

Income Tax Benefit

Income taxes include federal and state income taxes in the United States.

Results of Operations

Comparison of the Years Ended December 31, 2017 and 2018:

	Year Ended December 31,		
	2017	2018	Change
		(in thousands)	
Revenue	$ 26,807	$	$
Operating expenses:			
Costs of revenue (excluding amortization of intangible assets)	14,137		
Selling, general and administrative expenses	18,820		
Research and development expenses	1,551		
Amortization of intangible assets	186		
Change in fair value of acquisitions-related liabilities	(51)		
Total operating expenses	34,643		
Loss from operations	(7,836)		
Interest expense	(2,948)		
Loss on extinguishment of share purchase rights and 2013 Term Loan	(6,050)		
Change in fair value of financial instruments	(9,391)		
Other income, net	45		
Loss before income taxes	(26,180)		
Income tax benefit	549		
Net loss	$ (25,631)		

Revenue

Revenue increased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase was primarily due to .

Costs of Revenue

Costs of revenue increased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase was primarily due to .

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase was primarily due to .

Research and Development Expenses

Research and development expenses increased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase was primarily due to .

Amortization of Intangible Assets

Amortization of intangible assets decreased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This decrease was primarily due to .

Change in Fair Value of Acquisition-Related Liabilities

The change in fair value of acquisition-related liabilities decreased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This decrease was primarily due to .

Interest Expense

Interest expense increased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase was primarily due to .

Loss on Extinguishment of Share Purchase Rights and 2013 Term Loan

The loss on extinguishment of share purchase rights and 2013 Term Loan decreased $6.1 million, or 100%, in the year ended December 31, 2018 compared to the year ended December 31, 2017, as there were no similar charges in 2018.

Change in Fair Value of Financial Instruments

The change in fair value of financial instruments decreased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This decrease was primarily due to .

Other Income, Net

Other income, net, increased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase was primarily due to .

Income Tax Benefit

The income tax benefit increased $ million, or %, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase was primarily due to .

Liquidity and Capital Resources

We have incurred net losses since our inception. For the years ended December 31, 2017 and 2018, we incurred a net loss of $25.6 million and $ million, respectively, and we expect to incur

additional losses and increased operating expenses in future years. As of December 31, 2018, we had an accumulated deficit of $ million. To date, we have generated only limited revenue, and we may never achieve revenue sufficient to offset our expenses.

Since inception and through December 31, 2018, our operations have been financed primarily by net proceeds of approximately $149.5 million from sales of our equity and borrowings under various debt financings and revenue from the sales of our products. As of December 31, 2018, we had $ million of cash and cash equivalents. Cash in excess of immediate requirements is invested in accordance with our investment policy, primarily with a view to liquidity and capital preservation. Currently, our funds are held in cash and money market funds.

In September 2017, we entered into the loan agreement with Innovatus, under which we immediately drew down $20.0 million. In December 2018, we borrowed an additional $5.0 million under the loan agreement. The loan term is for five years with a final maturity date of September 2022. The loan accrues interest at an annual rate of 11%, of which 2.5%, during the first 24 months, will be treated as paid in kind interest. Paid in kind interest is added to the principal balance each period. After the initial 24 months of the loan, the entire 11% will be paid in cash at the end of each period. We may, at our option, prepay the term loan borrowings by paying the lender a prepayment premium, which expires in October 2020.

Our obligations under the loan agreement are secured by a security interest in substantially all of our assets, including our intellectual property. The loan agreement contains customary conditions to borrowing, events of default, and covenants, including covenants requiring us to maintain certain levels of minimum liquidity (in specified instances, is either at least $3.0 million, $2.0 million or the trailing four months of cash used to fund operating activities) and achieve certain minimum amounts of revenue and either gross margins or gross profits, and limiting our ability to dispose of assets, undergo a change in control, merge with or acquire other entities, incur debt, incur liens, pay dividends or other distributions to holders of our capital stock, repurchase stock and make investments, in each case subject to certain exceptions.

In connection with the execution of the loan agreement, we issued the lender a seven-year warrant to purchase 15,384,615 shares of our Series F redeemable convertible preferred stock at an exercise price of $0.078 per share, and in December 2018, in connection with the additional $5.0 million borrowed under the loan agreement, we issued to the lender a seven-year warrant to purchase 3,846,154 shares of our Series F redeemable convertible preferred stock at an exercise price of $0.078 per share. These warrants will become exercisable for an aggregate of 19,230,765 shares of our common stock upon the completion of this offering. If the loan agreement is repaid prior to September 7, 2019, we will be required to issue to the lender a warrant to purchase 3,000,000 shares of our Series F redeemable convertible preferred stock at an exercise price of $0.078 per share.

Funding Requirements

Our primary uses of cash are to fund our operations as we continue to grow our business. We expect to continue to incur operating losses in the near term as our operating expenses will be increased to support the growth of our business. We expect that our costs of revenue, selling, general and administrative expenses, and research and development expenses will continue to increase as we increase our test volume, expand our marketing efforts and increase our internal sales force to drive increased adoption of and reimbursement for our AVISE® testing products, promote SIMPONI®, prepare to commercialize new testing products, continue our research and development efforts and further develop our product pipeline. We expect that we will use a substantial portion of the net proceeds of this offering, in combination with our existing cash and cash equivalents, for these purposes and for the increased expenses associated with being a public company. We believe we

have sufficient laboratory capacity to support increased test volume. Other than the addition of laboratory equipment, we expect that we will not need to make material capital expenditures in the near term related to our laboratory facilities. Cash used to fund operating expenses is impacted by the timing of when we pay expenses, as reflected in the change in our outstanding accounts payable and accrued expenses.

We expect that our near- and longer-term liquidity requirements will continue to consist of working capital and general corporate expenses associated with the growth of our business, including payments we may be required to make upon the achievement of previously negotiated milestones associated with intellectual property we have licensed. The report of our independent registered public accounting firm on our audited financial statements for the year ended December 31, 2017 includes an explanatory paragraph stating that our recurring losses from operations and negative cash flows from operating activities raise substantial doubt about our ability to continue as a going concern. Based on our current business plan, we believe that the estimated net proceeds from this offering, together with our existing cash and cash equivalents and our anticipated future revenue, will be sufficient to meet our anticipated cash requirements for at least the next 12 months.

Our estimate of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors, including:

- our ability to maintain and grow sales of our AVISE® testing products, as well as the costs associated with conducting clinical studies to demonstrate the utility of our products and support reimbursement efforts;
- fluctuations in working capital;
- the costs associated with our promotion of SIMPONI®, including the expansion of our sales capabilities, and the extent and timing of generating revenue from such promotion;
- the costs of developing our product pipeline, including the costs associated with conducting our ongoing and future validation studies;
- our ability to achieve sufficient market acceptance, coverage and adequate reimbursement from third-party payers and adequate market share and revenue for our testing products;
- the additional costs we may incur as a result of operating as a public company; and
- the extent to which we establish additional partnerships or in-license, acquire or invest in complementary businesses or products.

Until such time, if ever, as we can generate revenue to support our costs structure, we expect to finance our operations through equity offerings, debt financings or other capital sources, including potentially collaborations, licenses and other similar arrangements. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders may be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. If additional funding is required or desired, there can be no assurance that additional funds will be available to us on acceptable terms on a timely basis, if at all, or that we will generate sufficient cash from operations to adequately fund our operating needs or achieve or sustain profitability. If we are unable to raise additional capital or generate sufficient cash from operations to adequately fund our operations, we will need to delay, reduce or eliminate some or all of our research and development programs, product portfolio expansion plans or commercialization efforts. Doing so will likely have an unfavorable effect on our ability to execute on our business plan and could have a negative impact on our relationships with parties such as Janssen. If we cannot expand our operations or otherwise capitalize on our

business opportunities because we lack sufficient capital, our business, financial condition, and results of operations could be adversely affected.

Cash Flows

The following table summarizes our cash flows for the years ended December 31, 2017 and 2018:

	Year Ended December 31,		
	2017	2018	Change
		(in thousands)	
Net cash provided by (used in):			
Operating activities	$ (10,968)	$	$
Investing activities	(510)		
Financing activities	19,156		
Increase in cash and cash equivalents	$ 7,678	$	$

Cash Flows from Operating Activities

Cash used in operating activities was $11.0 million for the year ended December 31, 2017 compared to $ million for the year ended December 31, 2018. The $ million increase in cash used in operating activities was primarily due to .

Cash Flows from Investing Activities

Cash used in investing activities was $0.5 million for the year ended December 31, 2017 compared to $ million for the year ended December 31, 2018. The $ million increase in cash used in investing activities was primarily due to .

Cash Flows from Financing Activities

Cash provided by financing activities was $19.2 million for the year ended December 31, 2017 compared to $ million for the year ended December 31, 2018. The $ million increase in cash provided by financing activities was primarily due to .

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations as of December 31, 2018:

	Payments Due by Period				
	Less Than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years	Total
			(in thousands)		
Contractual obligations:					
Operating leases(1)	$ 399	$ 446	$ –	$ –	$ 845
Capital leases	91	183	113		387
2017 Term Loan(2)	2,305	20,115	12,442	–	34,862
Non-cancelable purchase obligations(3)	3,250	3,250	–	–	6,500
Total contractual obligations:	$6,045	$23,994	$ 12,555	$ –	$42,594

(1) We lease approximately 33,500 square feet of office and laboratory space in Vista, California, under leases that expire in 2021, with options to extend the leases for an additional 24-month or 36-month period.

(2) We will make principal and interest payments to Innovatus in accordance with the required payment schedule for the 2017 Term Loan.

(3) Represents the minimum annual purchase commitment for one supplier.

The contractual obligations table does not include any additional potential contingent payments upon the future achievement by us of specified sales-based and other milestones, or royalty payments we may be required to make under license agreements we have entered into pursuant to which we have in-licensed certain intellectual property, including our license agreements with the University of Pittsburgh, Prometheus and Dr. Dervieux. See the section entitled “Business—Intellectual Property Overview—License Agreements” and Note 8 to our audited financial statements included elsewhere in this prospectus for additional information. The timing of when these additional payments will actually be made is uncertain and the payments are contingent upon the completion of future activities.

Critical Accounting Policies and Significant Management Estimates

Our management’s discussion and analysis of our financial condition and results of operations is based on our audited financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles, or GAAP. The preparation of these audited financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the audited financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions and any such differences may be material. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management’s judgments and estimates.

Revenue Recognition

To date, our revenue has been derived from sales of our testing products. We primarily market our testing products to rheumatologists in the Unites States. The rheumatologists who order our services and to whom test results are reported are generally not responsible for payment for these services. The parties that pay for these services consist of commercial third-party payers, Medicare and other government payers, and patients. Through December 31, 2017, we recognized revenue when the following criteria was met (i) persuasive evidence of an arrangement exists; (ii) delivery occurred or services have been rendered; (iii) the fee is fixed and determinable; and (iv) collectability is reasonably assured.

Our service is completed upon the delivery of test results to the prescribing rheumatologist which triggers billing for the service. We recognized revenue related to billings to payers on an accrual basis, net of contractual adjustments, only when we had established pricing with our third-party payers as indicated by contractual pricing arrangements or predictable patterns of payment for our services. In the absence of a predictable pattern of reimbursement or a contract with a payer, revenue was recognized upon cash receipt. For the year ended December 31, 2017, revenue was recognized on an accrual basis for one payer, Medicare, and totaled $8.2 million.

On January 1, 2018, we early adopted ASC Topic 606, *Revenue from Contracts with Customers,* and began recognizing revenue in accordance with the provisions thereof. We satisfy our performance obligation and recognize revenue upon delivery of test results. We estimate the amount of consideration we expect to be entitled to using the portfolio approach from each payer per test type. These estimates include the impact of contractual allowances and price concessions. Contracts with customers do not contain significant financing components based on the typical period of time between performance of services and collection of consideration. We record revenue on an accrual basis based on our estimate of the amount that will ultimately be realized for each test upon delivery based on a historical analysis of amounts collected by test and by payer.

These assessments require significant judgment by management.

Long Lived Assets

Our long-lived assets are comprised principally of our property and equipment, finite lived intangible assets, and goodwill. We apply Financial Accounting Standards Codification, or FASB, ASC Topic 360, *"Property, Plant, and Equipment,"* FASB ASC Topic 805, "*Business Combinations,*" and FASB ASC Topic 350*,* "*Intangibles-Goodwill and Other,*" to account for our property and equipment, goodwill, and intangible assets.

In accordance with these standards, we amortize all finite lived intangible assets over their respective estimated useful lives. In considering whether intangible assets are impaired, we combine our intangible assets and other long-lived assets (excluding goodwill), into groupings, a determination which we principally make on the basis of whether the assets are specific to a particular test offered by us or technology we are developing. If we identify events or circumstances indicate that the associated carrying amount of assets within a group may not be recoverable, we will consider the assets in the group impaired if the carrying value of the group's assets and directly associated liabilities exceed the estimated cash flows expected to be generated over the estimated useful life of the assets in the group. Management's estimates of future cash flows are impacted by projected levels of tests and levels of reimbursement, as well as expectations related to the future cost structure of the entity.

Goodwill is not amortized but is tested for impairment at least annually or more frequently whenever a triggering event or change in circumstances occurs, at the reporting unit level. For our goodwill impairment analysis, we operate in a single reporting unit, and allocate all goodwill to this reporting unit. We are required to recognize an impairment charge if the carrying amount of the reporting unit exceeds its fair value. Management uses all available information to make this fair value determination, including the present values of expected future cash flows using discount rates commensurate with the risks involved in the assets and observed market multiples of operating cash flows. If the estimated fair value of the reporting unit is less than the book value (including the goodwill), further management judgment must be applied in determining the fair values of individual assets and liabilities for purposes of the hypothetical purchase price allocation.

The judgments and estimates involved in identifying and quantifying the impairment of long-lived assets or goodwill involve inherent uncertainties, and the measurement of the fair value is dependent on the accuracy of the assumptions used in making the estimates and how those estimates compare to our future operating performance. No goodwill impairments were recorded during the year ended December 31, 2017.

Following the completion of this offering, our stock price and associated market capitalization will also be considered in the determination of reporting unit fair value. A prolonged or significant decline in our share price could provide evidence of a need to record a material impairment of goodwill.

Stock-Based Compensation

We recognize compensation expense related to stock-based awards to employees and directors based on the estimated fair value of the awards on the date of grant over the requisite service period of the awards (usually the vesting period) on a straight-line basis. The grant date fair value, and the resulting stock-based compensation expense, is estimated using the Black-Scholes option pricing model. The grant date fair value of stock-based awards is expensed on a straight-line basis over the vesting period of the respective award.

We recorded stock-based compensation expense of approximately $187,000 and $ for the years ended December 31, 2017 and 2018, respectively. We expect to continue to grant stock options and other equity-based awards in the future, and to the extent that we do, our stock-based compensation expense recognized in future periods will likely increase.

The Black-Scholes option pricing model requires the use of highly subjective and complex assumptions, which determine the fair value of stock-based awards. If we had made different assumptions, our stock-based compensation expense, net loss and net loss per share attributable to common stockholders could have been significantly different. See Notes 2 and 12 to our audited financial statements included elsewhere in this prospectus for information concerning certain of the specific assumptions we used in applying the Black-Scholes option pricing model to determine the estimated fair value of our stock options granted in the year ended December 31, 2017.

Significant Factors, Assumptions and Methodologies Used in Determining Fair Value of Our Common Stock

We are also required to estimate the fair value of the common stock underlying our stock-based awards when performing the fair value calculations. Our board of directors, with the assistance of management, determined the fair value of our common stock on each grant date. All options to purchase shares of our common stock are intended to be granted with an exercise price per share no less than the fair value per share of our common stock underlying those options on the date of grant, based on the information known to us on the date of grant.

Because there has been no public market for our common stock, the fair value of the common stock that underlies our stock options has historically been determined by our board of directors based upon information available to it at the time of grant, including the following:

- contemporaneous valuations performed by independent third-party firms;
- rights, preferences and privileges of our common stock compared to the rights, preferences and privileges of our other outstanding equity securities;
- our current and projected operating and financial performance, including our levels of available capital resources;
- trends and developments in our industry;
- the likelihood of achieving a liquidity event for the shares of common stock, such as an initial public offering or an acquisition of our company given prevailing market and sector conditions;
- the illiquidity of our securities by virtue of being a private company;
- the valuation of publicly traded companies in our sector, as well as recently completed initial public offerings and mergers and acquisitions of comparable companies;
- stage of development; and
- U.S. and global economic and capital market conditions.

The valuations of our common stock were prepared in accordance with the guidelines outlined in the American Institute of Certified Public Accountants Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation,* or the Practice Aid, which prescribes several valuation approaches for setting the value of an enterprise, such as the cost, income and market approaches, and various methodologies for allocating the value of an enterprise to its common stock. The cost approach establishes the value of an enterprise based on the cost of reproducing or replacing the property less depreciation and functional or economic obsolescence, if present. The income approach establishes the value of an enterprise based on the present value of future cash flows that are reasonably reflective of our company's future operations, discounting to the present value with an appropriate risk adjusted discount rate or capitalization rate. The market approach is based on the assumption that the value of an asset is equal to the value of a substitute asset with the same characteristics. Each valuation methodology was considered in our valuations. In determining a fair value for our common stock, we estimated the enterprise value of our business using either the market approach or income approach. In 2017 and 2018, we concluded that the market approach was the most appropriate. In accordance with the Practice Aid, we considered the various methods for

allocating the enterprise value across our classes and series of capital stock to determine the fair value of our common stock at each valuation date. Until December 2018, we concluded that the Option Pricing Method, or OPM, was most appropriate for each of the valuations of our common stock performed by independent third-party valuation specialists. We believed the OPM was the most appropriate given the expectation of various potential liquidity outcomes and the difficulty of selecting and supporting appropriate enterprise values given our early stage of development. Under the OPM, shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The values of the preferred and common stock are inferred by analyzing these options. In December 2018, we changed to a Probability-Weighted Expected Return Method, or PWERM, for estimating enterprise value given the increased probability of an initial public offering liquidity scenario. The PWERM is a scenario-based analysis that estimates the value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class.

If we had made different assumptions than those used, the amount of our stock-based compensation expense, net loss and net loss per share attributable to common stockholders could have been significantly different. Following the completion of this offering, the fair value per share of our common stock for purposes of determining stock-based compensation expense will be the closing price of our common stock as reported on the applicable grant date on the primary stock exchange on which our common stock is traded.

Based on the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, the intrinsic value of stock options outstanding as of December 31, 2018 would be $, of which $ and $ would have been related to stock options that were vested and unvested, respectively, at that date.

Estimated Fair Value of Share Purchase Rights, Redeemable Convertible Preferred Stock Warrants and Other Financial Instruments

From time to time, we enter into agreements with existing stockholders of our redeemable convertible preferred stock that contain future purchase obligations of redeemable convertible preferred stock at a fixed price. We evaluate these share purchase right agreements and assess whether they meet the definition of a freestanding instrument and, if so, determine the fair value of the share purchase right liability and record it on the balance sheet. The share purchase right liability is revalued at each reporting period with changes in the fair value of the liability recorded as a component of other income (expense) in the statement of operations. The share purchase right liability is revalued at settlement and the resultant fair value is then reclassified to redeemable convertible preferred stock at that time. The estimated fair value of the share purchase right liability is determined using valuation models that consider the probability of achieving the requisite milestones, our cost of capital, the estimated time period the preferred stock right would be outstanding, consideration received for the convertible preferred stock, the number of shares to be issued to satisfy the preferred stock purchase right and at what price, and probability of the consummation of an initial public offering, as applicable.

We account for our redeemable convertible preferred stock warrant liabilities as freestanding instruments for shares that are puttable or redeemable. These warrants are classified as liabilities on our balance sheet and are recorded at their estimated fair values. At the end of each reporting period, changes in estimated fair value during the period are recorded as a component of other income (expense), net in the accompanying statement of operations. We will continue to re-measure the fair value of the warrant liabilities until: (i) exercise; (ii) expiration of the related warrant; or (iii) conversion of the preferred stock underlying the security into common stock, which will occur in connection with the completion of this offering. We estimate the fair values of our warrant liabilities using an option pricing model based on inputs as of the valuation measurement dates, including the fair value of our

redeemable convertible preferred stock, the estimated volatility of the price of our redeemable convertible preferred stock, the expected term of the warrants and the risk-free interest rates.

There are significant judgments and estimates inherent in the determination of the fair values of our preferred stock purchase right liabilities and redeemable convertible preferred stock warrant liabilities. If we had made different assumptions, the carrying value of these liabilities, net loss and net loss per share attributable to common stockholders could have been significantly different.

Acquisition-Related Liabilities

In connection with the acquisition of the medical diagnostics division of Cypress in 2010, we initially agreed to pay an additional amount not to exceed $9.0 million in the event specified revenue, contractual and product launch milestones are achieved. This contingent liability required the use of inputs which were not observable in the market to assess its fair value at the end of each reporting period. For this liability, fair value was determined based on probabilities assigned to the milestones being achieved, revenue projections, and interest rates. Changes in fair value were recorded in the statement of operations and comprehensive loss. In February 2017, we amended two of the remaining agreements for which a contingent payment amount had been originally agreed to. One contingent payment amount remains outstanding.

Income Taxes

We operate in, and are subject to tax authorities in, various tax jurisdictions in the United States. To date, we have not been audited by the Internal Revenue Service or any state income tax authority, however all tax years remain open for examination by federal tax authorities.

At December 31, 2018, our deferred tax assets are primarily comprised of federal and state tax net operating loss carryforwards. We have performed an analysis to determine whether an “ownership change” occurred from inception to December 31, 2013. Based on this analysis, we determined that we did experience a historical ownership change of greater than 50% in 2008. Therefore, our ability to utilize our net operating losses incurred prior to this date is limited.

We are required to reduce our deferred tax assets by a valuation allowance if it is more likely than not that some or all of our deferred tax assets will not be realized. We must use judgment in assessing the potential need for a valuation allowance, which requires an evaluation of both negative and positive evidence. The weight given to the potential effect of negative and positive evidence should be commensurate with the extent to which it can be objectively verified. In determining the need for and amount of our valuation allowance, if any, we assess the likelihood that we will be able to recover our deferred tax assets using historical levels of income, estimates of future income and tax planning strategies. As a result of historical cumulative losses and uncertainties surrounding our ability to generate future taxable income and, based on all available evidence, we believe it is more likely than not that our recorded net deferred tax assets will not be realized. Accordingly, we have recorded a valuation allowance against all of our net deferred tax assets at December 31, 2018. We will continue to maintain a full valuation allowance on our deferred tax assets until there is sufficient evidence to support the reversal of all or some portion of this allowance.

The above listing is not intended to be a comprehensive list of all of our accounting policies. In many cases, the accounting treatment of a particular transaction is specifically dictated by GAAP. There are also areas in which our management’s judgment in selecting any available alternative would not produce a materially different result. Please see our audited financial statements and notes thereto included elsewhere in this prospectus, which contain accounting policies and other disclosures required by GAAP.

Recently Adopted Accounting Standards

In May 2014, the FASB issued Accounting Standards Update, or ASU, 2014-09, *Revenue from Contracts with Customers*, which, along with subsequent amendments and addenda to this standard, provides a five-step analysis of transactions to determine when and how revenue is recognized. The core principle is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This ASU is effective for annual periods beginning after December 15, 2017 for public companies and annual periods beginning after December 15, 2018 for private companies and shall be applied retrospectively to each period presented or as a cumulative-effect adjustment as of the date of adoption. The FASB has issued subsequent guidance related to specific implementation issues for ASU 2014-09. We early adopted this guidance on January 1, 2018 and the ASU resulted in an acceleration of revenue recognition since we are required to estimate consideration to which we expect to be entitled, subject to constraint. We recorded a cumulative-effect adjustment to the opening balance of retained earnings.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash.* The amendments in this update require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. We adopted this guidance for our fiscal year beginning January 1, 2018. Our restricted cash balance consists of a federally insured certificate of deposit held with an affiliate of a large publicly traded financial institution that secures our corporate borrowing program. Due to the duration of this certificate of deposit, the amounts restricted as to use have been classified outside of cash and cash equivalents. The new guidance did not have a material impact on our financial statements.

In January 2017, the FASB issued ASU 2017-04, *Simplifying the Test for Goodwill Impairment*. This guidance is intended to simplify the accounting for goodwill impairment for all entities by requiring impairment charges to be based on the first step in today's two-step impairment test under the guidance contained in ASC 350. Specifically, this guidance eliminates the requirement to calculate the implied fair value of goodwill to measure a goodwill impairment charge. Instead, entities will record an impairment charge based on the excess of a reporting unit's carrying amount over its fair value. We adopted this guidance on January 1, 2018. The adoption of this guidance did not have a material impact on our financial statements.

Recent Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The new topic supersedes Topic 840, Leases, and increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and requires disclosures of key information about leasing arrangements. In July 2018, the FASB issued ASU 2018-10, *Codification Improvements to Topic 842*, which provides narrow amendments to clarify how to apply certain aspects of the new lease standard, and ASU 2018-11, *Leases: Targeted Improvements*, which was issued to provide relief to companies from restating comparative periods. Pursuant to this ASU, in the period of adoption we will not restate comparative periods presented in our financial statements. The effective date of this guidance for public companies is for reporting periods beginning after December 15, 2018, and periods beginning after December 15, 2019 for private companies. ASU 2016-02 mandates a modified retrospective transition method. We are currently evaluating the impact of ASU 2016-02 on our financial statements.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements, as defined under the rules and regulations of the SEC.

Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks in the ordinary course of our business. These risks primarily relate to interest rates. As of December 31, 2018, we had cash and cash equivalents of $ million, which consist of bank deposits and money market funds. Such interest-bearing instruments carry a degree of risk; however, we have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in interest rates. A hypothetical 10% change in interest rates during any of the periods presented would not have had a material impact on our audited financial statements. Our long-term debt bears interest at a fixed rate.

JOBS Act Accounting Election

The JOBS Act contains provisions that, among other things, reduce certain reporting requirements for an “emerging growth company.” The JOBS Act permits an “emerging growth company” such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We have elected to use this extended transition period under the JOBS Act until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our audited financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We will remain an emerging growth company until the last day of our fiscal year following the fifth anniversary of the date of the first sale of our common equity securities pursuant to an effective registration statement under the Securities Act, which such fifth anniversary will occur in 2024. However, if certain events occur prior to the end of such five-year period, including if we become a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, our annual gross revenues exceed $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

BUSINESS

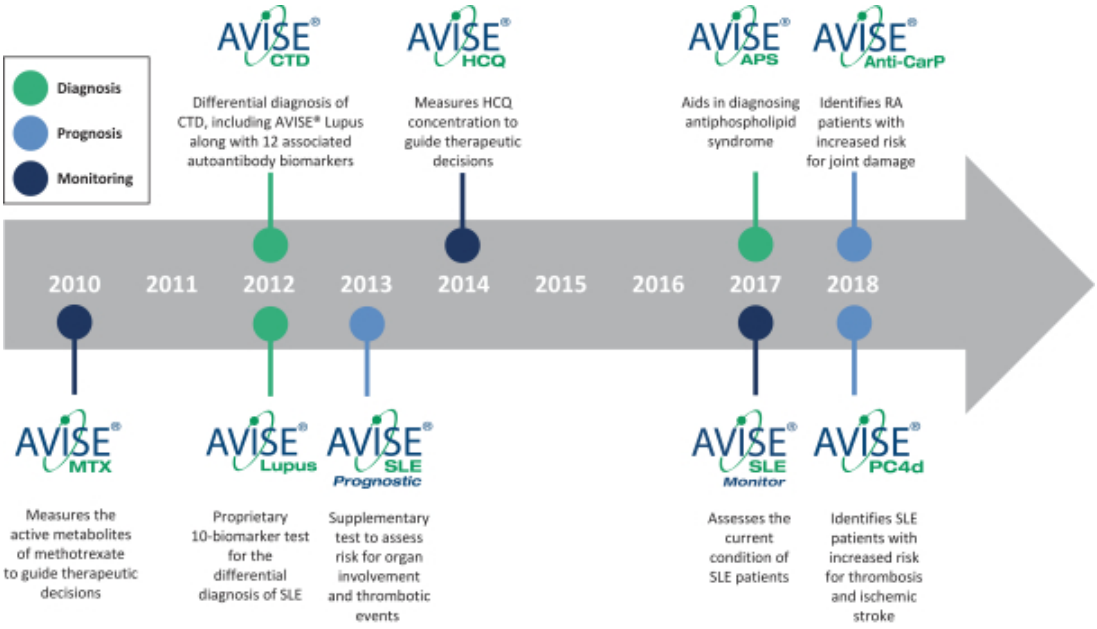
Company Overview

Exagen is dedicated to transforming the care continuum for patients suffering from debilitating and chronic autoimmune diseases by enabling timely differential diagnosis and optimizing therapeutic intervention. We have developed and are commercializing a portfolio of innovative testing products under our AVISE® brand, several of which are based on our proprietary Cell-Bound Complement Activation Products, or CB-CAPs, technology. CB-CAPs assess the activation of the complement system, a biological pathway that is widely implicated across many autoimmune and autoimmune-related diseases, including systemic lupus erythematosus, or SLE. Our goal is to enable rheumatologists to improve care for patients through the differential diagnosis, prognosis and monitoring of complex autoimmune and autoimmune-related diseases, including SLE and rheumatoid arthritis, or RA. Our strategy includes leveraging our portfolio of testing products to market therapeutics through our sales channel, targeting the approximately 5,000 rheumatologists across the United States. Our business model of integrating testing products and therapeutics positions us to offer targeted solutions to rheumatologists and, ultimately, better serve patients.

We currently market nine testing products under our AVISE® brand, which we are leveraging to establish partnerships with leading pharmaceutical companies. In December 2018, we entered into a co-promotion agreement with Janssen Biotech, Inc., or the Janssen agreement, to exclusively promote SIMPONI® (golimumab), a subcutaneous, once-per-month, anti-tumor necrosis factor, or anti-TNF, biologic prescribed in combination with methotrexate, in the United States for the treatment of adult patients with moderate to severe RA and for other indicated rheumatic diseases. We began direct promotion of SIMPONI® in January 2019 and are in the process of expanding our salesforce from 31 representatives as of December 31, 2018 to up to 60 representatives by the end of the first quarter of 2019 to support these promotion efforts. Combined U.S. sales of SIMPONI® and SIMPONI ARIA®, an intravenous formulation, were approximately $1 billion in 2018. We believe our strategy of integrating the promotion of testing products and therapeutics, combined with our specialized salesforce, uniquely positions us to expand SIMPONI®'s U.S. market share.

Our lead testing product, AVISE® CTD, enables differential diagnosis for patients presenting with symptoms indicative of a wide variety of connective tissue diseases, or CTDs, and other related diseases with overlapping symptoms. The comprehensive nature of AVISE® CTD allows for the testing of a number of relevant biomarkers in one convenient blood draw, as opposed to testing serially for individual biomarkers, which adds time and cost to the diagnostic process. We believe AVISE® CTD may provide clinical utility for over 23 million patients in the United States suffering from these diseases, which include SLE, RA, Sjögren's syndrome, antiphospholipid syndrome, or APS, other autoimmune-related diseases such as autoimmune thyroid, and other disorders that mimic these diseases, such as fibromyalgia. There is an unmet need for rheumatologists to add clarity in their CTD clinical evaluation, and we believe there is a significant opportunity for our tests that enable the differential diagnosis of these diseases, particularly for potentially life-threatening diseases such as SLE.

We have demonstrated a strong track record of developing innovative testing products that meet the needs of diagnosing, prognosing and monitoring CTDs, as illustrated below:



AVISE® CTD leverages our proprietary CB-CAPs technology to enable the differential diagnosis SLE. AVISE® CTD provides rheumatologists and their patients with sensitive and specific results that allow for potentially faster and more accurate differential diagnosis of SLE as compared to other currently-marketed testing methods. Beyond SLE, AVISE® CTD allows rheumatologists to accurately diagnose other overlapping autoimmune and autoimmune-related diseases, including RA, with the same blood sample.

Our AVISE® SLE Monitor testing product also leverages our proprietary CB-CAPs technology by measuring two CB-CAPs biomarkers that offer insight into a patient's disease activity. This test is designed to enable rheumatologists to effectively assess and optimize therapeutic intervention in patients diagnosed with SLE. Depending on disease severity, AVISE® SLE Monitor may be utilized by patients multiple times a year throughout their lives.

Our RA-focused testing products include AVISE® MTX and AVISE® Anti-CarP. AVISE® MTX is a drug monitoring test designed to aid in the optimization of methotrexate therapy, the standard of care and first-line therapy for patients with RA. AVISE® MTX is based on our proprietary methotrexate polyglutamate, or MTXPG, technology that measures blood levels of MTXPGs, the active metabolite of methotrexate linked to disease control in RA patients. Measuring MTXPGs allows rheumatologists to identify patients presenting with inadequate exposure to methotrexate enabling them to optimize dosing and achieve therapeutic levels commensurate with adequate disease control. AVISE® Anti-CarP, which measures anti-carbamylated protein antibody, or anti-CarP, was developed by the Leiden University Medical Center, and we recently introduced it as a biomarker-driven RA prognostic test through a distribution agreement with Inova Diagnostics, Inc. with the goal of identifying patients prone to more severe disease.

We market our AVISE® testing products using our specialized salesforce. Since the launch of AVISE® CTD in 2012 through December 31, 2018, we have performed over 280,000 of these tests,

representing a compound annual growth rate of 87%, with limited incremental investment in our commercial infrastructure. Over 83,000 AVISE® CTD tests were performed in 2018, representing 18% growth over 2017, and the number of ordering physicians in the fourth quarter of 2018 reached 1,298, representing 18% growth over the same period in 2017. In the fourth quarter of 2018, we achieved a record number of 512 adopting physicians, which we classify as those who had previously prescribed at least 11 tests in a quarter, compared to 401 in the same period in 2017. Nearly 100% of adopting physicians continue to order tests in subsequent quarters.

In addition, we continue to populate a growing proprietary database of over 280,000 de-identified patient test results. We believe the insight emerging from these results has the potential to unlock value for pharmaceutical and biotechnology companies in the commercialization of therapeutics. We believe we also have the ability to further leverage our database to optimize patient selection in clinical trials for companies developing therapeutics for autoimmune and autoimmune-related diseases. We plan to collaborate with our existing and future pharmaceutical and biotechnology partners to help maximize the full value of our in-house database.

We believe our strategy of integrating the promotion of testing products and therapeutics differentiates us from other diagnostic and pharmaceutical companies, and provides our specialized salesforce greater access to rheumatologists. Unlike many diagnostic salesforces that are trained only to understand the comparative benefits of their tests, the specialized backgrounds of our salesforce coupled with our comprehensive training enables our sales representatives to interpret results from our de-identified test reports and provide unique insights in a highly tailored discussion with rheumatologists. Our integrated testing and therapeutics strategy results in a unique opportunity to promote and sell targeted therapies in patient focused sales calls with rheumatologists, including those with whom we have a longstanding relationship and who have a history using our portfolio of testing products.

We recently entered into the Janssen agreement for the promotion of SIMPONI® in order to advance our integrated testing and therapeutics strategy. To support the co-promotion of SIMPONI®, we are in the process of expanding our salesforce from 31 representatives as of December 31, 2018 to up to 60 representatives by the end of the first quarter of 2019. This will enable us to conduct approximately 66,000 calls annually to rheumatologists, which we believe will enable us to achieve the optimal reach and frequency with rheumatologists. We also have agreements with other leading pharmaceutical companies, including GlaxoSmithKline LLC, or GSK, and Horizon Pharma USA, Inc., or Horizon Pharma, that leverage our testing products and the data generated from such tests. We provide GSK, a leader in lupus therapeutics, our test result data to provide market insight into and help increase awareness of the benefits of an early and accurate diagnosis of SLE. Our agreement with Horizon Pharma entails utilizing our AVISE® MTX test to report on levels of MTXPG in patients undergoing methotrexate therapy in combination with its anti-gout product KRYSTEXXA® in an ongoing Phase 4 clinical trial. We plan to pursue additional partnerships with a focus on integrating therapeutics that are synergistic with our evolving portfolio of testing products.

We are led by an experienced management team with unique capabilities to execute on our strategy of integrating the promotion of testing products and therapeutics. Our senior management has an average of over 20 years of experience in the healthcare industry and many were previously involved with successfully building Prometheus Laboratories Inc., or Prometheus, which was focused on integrating diagnostics and therapeutics, prior to its acquisition by Nestlé Health Science S.A. in 2011.

Our Strategy

We develop and commercialize next-generation testing products and promote synergistic therapeutics to ultimately improve the continuum of care for patients suffering from debilitating and chronic autoimmune diseases. The key tenets of our business strategy include:

- ***Drive additional market penetration for our testing products.*** Our portfolio of testing products enables the differential diagnosis, prognosis and monitoring of complex autoimmune and autoimmune-related diseases. We have demonstrated a strong track record of commercial growth from our testing products, leveraging our specialized salesforce and expansive network of relationships with rheumatologists across the United States. We believe we are uniquely positioned to continue expanding our commercial presence within the autoimmune disease market and plan to continue to invest in our salesforce in order to achieve the optimal reach and frequency with rheumatologists. This will support our strategy of integrating the promotion of testing products and therapeutics. In addition, we will continue to expand our efforts in the targeted promotion and education of rheumatologists and payers as to the clinical and cost benefits of our testing products. We believe these efforts will position us to capture additional market share for our portfolio of testing products.
- ***Integrate the promotion of testing products and therapeutics for autoimmune and autoimmune-related diseases.*** Our integrated testing and therapeutics strategy leverages our sales and marketing efforts, targeting rheumatologists for the commercialization of our testing products to promote therapeutics. This establishes a compelling synergy compared to traditional pharmaceutical sales resulting in greater access to rheumatologists and positions us to potentially create value for pharmaceutical partners. In January 2019, we began our exclusive promotion of SIMPONI® in the United States, leveraging our integrated testing and therapeutics strategy, for the treatment of adult patients with moderate to severe RA and for other indicated rheumatic diseases.
- ***Continue our track record of developing innovative testing products.*** Since inception, we have demonstrated a strong track record of developing testing products that address the challenges in the differential diagnosis, prognosis and monitoring of patients with autoimmune and autoimmune-related diseases. We are leveraging our proprietary CB-CAPs and MTXPG technologies to develop additional testing products designed to have superior clinical utility for CTDs. We believe our commitment to innovating our portfolio of testing products will further strengthen our relationships with rheumatologists and our value proposition to our existing and future pharmaceutical and biotechnology partners.
- ***Establish additional therapeutic partnerships.*** We believe our agreements with Janssen Biotech, Inc., or Janssen, and other leading pharmaceutical companies validate our unique value proposition to pharmaceutical companies seeking a competitive edge for commercializing therapeutics for autoimmune and autoimmune-related diseases. We intend to leverage our integrated testing and therapeutics strategy to establish additional partnerships with a focus on the commercialization of therapeutics that are synergistic with our testing products.
- ***Achieve meaningful margin expansion.*** We believe growth from the promotion of therapeutics will meaningfully improve our margin profile and further support our goal of achieving profitability. We also expect an increase to our gross margins in January 2020 onwards upon the expiration of a 10% annual royalty on our CB-CAPs technology. In addition, we believe we are well positioned to drive further margin expansion through a continued focus on increasing operating leverage through the implementation of certain internal initiatives, such as conducting additional validation and reimbursement oriented clinical studies to facilitate payer coverage of our testing products, capitalizing on our growing reagent purchasing to negotiate improved volume-based pricing and automation in our clinical laboratory to reduce material and labor costs.

Autoimmune and Connective Tissue Diseases

Autoimmune diseases encompass a broad range of serious, chronic and debilitating conditions in which a person's immune system creates antibodies that mistakenly react against normal healthy tissues causing inflammation and irreversible tissue damage. These antibodies are called autoantibodies and their detection through blood tests can help diagnose, prognose and monitor the course of autoimmune diseases. However, knowing when and which autoantibody to test for is challenging due to the vagueness of symptoms, the unexplained flaring and remission of symptoms, and the many conditions which can mimic autoimmune disease. Early and accurate diagnosis of the conditions causing these overlapping symptoms is critical as an incorrect diagnosis can lead to toxicity from inappropriate medications, irreversible tissue damage and other comorbidities associated with uncontrolled disease. There is no known cause or cure for these chronic conditions and current treatment interventions are targeted at managing symptoms and limiting disease progression.

CTDs are a sub-category of autoimmune diseases involving inflammation of the joints, tissues and internal organs. Persons with CTDs often present to their rheumatologist with complaints of joint pain, fatigue, unexplained fever, inflammation, rash, stiffness and muscle aches. These symptoms overlap among numerous CTDs, including SLE, one of the most severe CTDs and historically difficult to rule out, as well as other autoimmune-related diseases and other disorders that mimic these diseases, such as fibromyalgia. Based on a study we commissioned in 2014, we estimate that there are approximately 23 million undiagnosed patients in the United States who are symptomatic of these conditions and who may benefit from the differential diagnosis of CTDs. Of these patients, we estimate approximately seven million are potentially referable to rheumatologists and would be candidates for an AVISE® CTD test.

Systemic Lupus Erythematosus

SLE, the most common and severe form of lupus, is a chronic, inflammatory disorder that can damage any part of the body, including the skin, joints and internal organs. The blood of a person afflicted with SLE contains autoantibodies, which are the cause of the inflammation and organ damage and are one indicator of immune system abnormalities. SLE is characterized by a rise in symptoms and/or abnormal laboratory test results. SLE varies in severity, from mild cases to those in which significant and potentially fatal damage occurs to vital organs such as the brain, heart, kidneys and lungs. Detection of these autoantibodies can assist rheumatologists in the diagnosis of SLE. Diagnosis of SLE allows rheumatologists to initiate the most appropriate therapy to minimize irreversible organ damage and reduce morbidity and mortality. Current treatment for SLE involves the use of antimalarials, corticosteroids, immunosuppressants and biologic agents to prevent or suppress active disease or flares.

Standard laboratory tests for diagnosing SLE include measuring immunological biomarkers, such as antinuclear antibodies, or ANA, anti-double stranded DNA, or anti-dsDNA, and other autoantibody tests. ANA are a group of autoantibodies produced by a person's immune system when it fails to adequately distinguish between self and non-self. The ANA test detects these autoantibodies in the blood and is a useful screening tool for SLE and other autoimmune and autoimmune-related diseases. The vast majority of SLE patients test positive for ANA. However, the high sensitivity of ANA for SLE is counterbalanced by somewhat poor specificity. Sensitivity measures the proportion of patients who are correctly identified as having a particular condition, while specificity measures the proportion of patients who are correctly identified as not having a particular condition. Therefore, the majority of individuals who test positive for ANA do not have SLE. Only approximately 11-13% of individuals with a positive ANA test have SLE. This lack of specificity leads to many inappropriate non-autoimmune referrals to the rheumatologist from primary care physicians. For example, it has been reported that 30% of fibromyalgia patients may test positive for ANA, potentially generating as many as four million inappropriate rheumatology referrals. In addition, a study published in 2012 reported the estimated

prevalence of a positive ANA test in the normal, healthy, U.S. population to be 13.8%, or 32 million people, indicating a significant need for a highly-specific test for this disease.

Anti-dsDNA are autoantibodies that target a person's double stranded DNA. The anti-dsDNA antibody test is a very specific test for SLE as anti-dsDNA antibodies are rarely found in autoimmune diseases other than SLE. A strongly positive anti-dsDNA antibody test makes it very likely that a person has SLE, although if the test is negative it does not necessarily rule out SLE. Approximately 30-70% of people with SLE have a negative anti-dsDNA antibody test, reaffirming the need for an effective testing product which adds clarity to the rheumatologist's clinical assessment.

Activation of the complement system is an integral part of the disease process of SLE. Thus, rheumatologists measure components of the complement system, including serum levels of C3 and C4, to help diagnose SLE and monitor SLE disease activity. In 2012, the Systemic Lupus Collaborating Clinics added low C3 and low C4 as immunologic criteria for classifying SLE. In active SLE, C3 and C4 complement proteins are consumed and broken down to fragments, known as complement activation products. Therefore, low levels of C3 and C4 suggest a diagnosis of SLE and that the disease is active. However, variability in the levels of C3 and C4 can occur due to factors unrelated to SLE disease presence or disease activity, making them less reliable as biomarkers for SLE. For example, C3 and C4 are acute phase reactants and produced during inflammation. As a result, many SLE patients have normal complement levels even when the disease is active. Although relatively specific for SLE, low complement levels can also be seen in certain chronic infections, including non-lupus related kidney inflammation, severe liver disease and other autoimmune diseases. CB-CAPs are formed when the fragments of complement activation products from C4 bind permanently to circulating cells such as red blood cells, b-cells and platelets. This binding lasts for the life of the cell and represents a more stable and reliable indicator of complement activation than measuring C3 and C4 alone.

In March 2011, the first new biologic drug targeting treatment of SLE in over 50 years, GSK's Benlysta®, was approved by the U.S. Food and Drug Administration, or the FDA. It is the only approved biologic for the treatment of SLE. Since its approval, there have been a number of drug development programs that have failed in SLE, which may suggest that guidelines for classifying SLE patients and the endpoints used to determine clinical effectiveness have not adequately addressed the complexity of the disease process and its heterogeneous population. We believe biopharmaceutical companies would benefit from the differential diagnosis enabled by our AVISE® testing products in order to better identify sub-populations of SLE patients for targeted therapies.

Rheumatoid Arthritis

RA is a chronic, systemic autoimmune disease in which the immune system attacks the joints and can also affect other organ systems. The annual incidence and prevalence of RA in the United States is estimated to be 75,000 and 1.75 million, respectively. Patients suffering from RA develop joint damage that is associated with painful inflammation which often progresses to irreversible damage of cartilage and bone leading to significant disability and a reduction in quality of life and the ability to work. Early diagnosis and effective treatment of RA is critically important to prevent erosive bone or joint damage and disability. Rheumatologists are compelled to reach a definitive diagnosis quickly and administer effective treatment.

Diagnosis of RA involves performing a complete medical history with physical and/or radiographic examination of the number and distribution of swollen, tender and painful joints that have persisted for more than six weeks. Laboratory testing for rheumatoid factor, or RF, anti-cyclic citrullinated peptide, or CCP, antibodies, and testing for general, nonspecific inflammation with erythrocyte sedimentation rate, or the ESR, and C-reactive protein tests are used to assist in the diagnosis.

The standard of care for the treatment for RA involves the use of Disease Modifying Anti-Rheumatic Drugs, or DMARDs, which have shown, in clinical studies, the ability to slow or stop disease progression. Methotrexate remains the most commonly used DMARD, due to its low cost, effectiveness, and the extensive clinical experience with its use. It is estimated that approximately 74% of RA patients in the United States, or 1.3 million patients, are treated with methotrexate, either as a monotherapy or in combination with another DMARD.

Biologics DMARDs are proteins that have been genetically modified to target cellular components of the immune system that attack healthy tissues causing the symptoms of RA. They are a targeted form of therapy, which makes them different from traditional RA treatments, such as methotrexate. The first FDA approved biologics for RA were the anti-TNFs. ENBREL® was approved for RA in 1998 and the latest, SIMPONI®, was approved in 2009. The anti-TNFs dominate the therapy for RA and generally are the first biologics chosen to augment methotrexate when patients are not achieving a satisfactory response.

Our Solution

We currently market nine testing products under our AVISE® brand that allow for the differential diagnosis, prognosis and monitoring of complex autoimmune and autoimmune-related diseases, including SLE and RA. Our product portfolio integrates our proprietary CB-CAPs technology, which is a stable and reliable method for differentially diagnosing SLE. We focus on leveraging our portfolio of testing products to promote therapeutics through our sales channel targeting the approximately 5,000 rheumatologists across the United States. In December 2018, we entered into the Janssen agreement to exclusively promote SIMPONI® in the United States for the treatment of adult patients with moderate to severe RA and for other indicated rheumatic diseases. In January 2019, we began direct promotion of SIMPONI® with our specialized salesforce.

Our Proprietary Technologies

We have two core proprietary technologies, CB-CAPs and MTXPGs, which form the backbone of several of our testing products.

CB-CAPs

Our proprietary CB-CAPs technology determines the blood levels of complement activation proteins permanently deposited on hematopoeitic cells. The determination of complement proteins in a patient's blood is a mainstay in clinical laboratory science, and state-of-the-art methods traditionally rely on measurement of serum or plasma levels of soluble complements. C3 and C4 are the most commonly determined complement proteins in the blood and the precursors to activation of complement proteins into biologically active breakdown products. However, there are limitations with measuring C3 and C4 blood levels as indicators of complement activation. For example, increased synthesis of C3 and C4 by the liver can offset increased C3 and C4 breakdown during activation of the complement cascade, resulting in no change in serum levels. While the limitations and drawbacks of measuring standard components of the complement system, such as C3 and C4, are well recognized by the medical community, these laboratory biomarkers are part of international guidelines for the classification of SLE.

We believe the availability of novel complement biomarkers supporting or replacing standard C3 and C4 measures will be of great value for rheumatologists and ultimately their patients. Our CB-CAPs technology directly measures protein products of complement activation, such as C4d, the product of C4 activation. These complement activation products become stably attached to surfaces of circulating blood cells to become CB-CAPs. As such, the determination of CB-CAPs in the blood provides benefits when compared to the traditional complement measurement. These include the stable, accurate and unequivocal information of complement activation that enable consistent measurement and an

improved ability to assess and monitor changes in biological activity related to activation of the complement system.

MTXPGs

Methotrexate is the standard of care and first-line treatment of many autoimmune diseases including RA and psoriatic arthritis. Our proprietary technology measures blood levels of MTXPGs, which are the active metabolite of methotrexate. The technology uses a dried capillary blood-based collection method coupled with liquid chromatographic tandem mass spectrometry and quantifies nanomolar concentrations of MTXPG using at least two orders of magnitude lower blood volume than venipuncture. MTXPG blood levels are actionable clinical utility checkpoints and can help clinicians identify causes for a lack of response to methotrexate, such as poor activation to active metabolites, underexposure secondary to poor absorption or poor compliance, all of which are limiting factors to the achievement of a robust clinical response with this first-line treatment. We believe we can leverage this technology to optimize anti-TNF treatment by reducing the formation of anti-drug antibodies that are known to impact the clinical efficacy of these drugs.

Testing Products

Since inception, we have been committed to developing and commercializing innovative testing products that address the challenges rheumatologists face in differentially diagnosing, prognosing and monitoring complex autoimmune and autoimmune-related diseases.

Diagnosis

AVISE® CTD

Our lead testing product, AVISE® CTD, is a comprehensive test that aids in the differential diagnosis of SLE versus other common CTDs. The SLE portion of the test employs our proprietary CB-CAPs technology and specifically measures activation of the complement system by quantifying the level of two CB-CAPs biomarkers in the patient's blood, B-cell C4d, or BC4d, and erythrocyte bound C4d, or EC4d, which are higher in patients with SLE compared to patients with other CTDs. In addition, the comprehensive nature of AVISE® CTD enables testing for a series of 22 biomarkers in one convenient blood draw to further aid in the differential diagnosis of a wide variety of CTDs and other diseases which can be challenging to diagnose as a result of overlapping symptoms. These diseases include SLE, RA, Sjögren's syndrome, APS, other autoimmune-related diseases such as autoimmune thyroid, and other disorders that mimic these diseases, such as fibromyalgia. Our test's ability to allow rheumatologists to effectively rule out SLE and differentially diagnose other CTDs such as RA adds clarity to the rheumatologist's assessment, thereby making the evaluation process more efficient and accurate. The clinical performance of our proprietary biomarkers and the convenience of a single blood draw make AVISE® CTD an attractive choice among rheumatologists.

AVISE® Lupus

The AVISE® Lupus test employs our proprietary CB-CAPs technology and is the cornerstone of the SLE assessment within our more comprehensive AVISE® CTD testing product. AVISE® Lupus measures activation of the complement system by quantifying the level of BC4d and EC4d in the patient's blood. Rheumatologists choose to order the comprehensive AVISE® CTD test or the more focused AVISE® Lupus test based on medical necessity, which is determined by each patient's symptoms and medical history.

AVISE® APS

AVISE® APS consists of a specialized panel of eight autoantibody tests. This test aids in both the diagnosis and management of APS, a hyper-coagulation state leading to thrombosis, pregnancy

complications, and even death. Rheumatologists would typically request the AVISE® APS test in patients who initially tested positive for one or more APS biomarkers contained in AVISE® CTD, or in the management of patients experiencing a high-risk pregnancy.

Prognosis

AVISE® SLE Prognostic

AVISE® SLE Prognostic is a ten-biomarker panel of autoantibodies that have established predictive value for assessing the potential for complications affecting the kidney, brain and cardiovascular system, including lupus nephritis and lupus psychosis. Rheumatologists rely on insights from the AVISE® SLE Prognostic test to help tailor their treatment approach.

AVISE® Anti-CarP

We were the first commercial laboratory to make testing for anti-CarP available in the United States with the introduction of AVISE® Anti-CarP in 2018. This test uniquely addresses two major challenges facing rheumatologists today – (1) patients presenting with RA symptoms but lacking the common confirmatory blood tests for anti-RF or anti-CCP, known as sero-negative patients, and (2) the lack of a serologic indicator, which indicates a poor prognosis and helps guide treatment decisions. Anti-CarP can be positive in up to 26% of RA patients who are negative for anti-CCP. Furthermore, RA patients positive for Anti-CarP have an increased risk for more severe RA disease, including permanent joint damage.

AVISE® PC4d

AVISE® PC4d is one of our newest offerings, which reflects over 10 years of research efforts and employs our proprietary CB-CAPs technology. This proprietary CB-CAP biomarker measures platelet- bound C4d, or PC4d, and has been shown in clinical studies to have significant association with thrombosis and ischemic stroke in SLE. These thrombotic events can be among the most damaging and deadly forms of lupus flares and often strike without warning. Because of its strong association with thrombosis, we believe AVISE® PC4d promises to be a valuable tool for SLE disease monitoring.

Monitoring

AVISE® SLE Monitor

AVISE® SLE Monitor is a six-biomarker blood test that employs our proprietary CB-CAPs technology and is intended to assess the condition of a patient that has been diagnosed with SLE. It offers a unique combination of biomarkers that measure for EC4d, which has shown greater accuracy in tracking disease activity than C3 and C4, and PC4d, which is associated with thrombosis risk in SLE. AVISE® SLE Monitor offers additional insight into a patient's disease activity as well as possible adverse events. Rheumatologists have limited methods for evaluating the extent of disease activity taking place inside the body of an SLE patient. They rely on imperfect biomarkers, overt symptoms or flares, and patient reported history, all of which leave the rheumatologists looking for greater insights. In surveys conducted with SLE patients, it has been reported that patients tend to under report their symptoms and over 70% of physicians are unaware of this bias. AVISE® SLE Monitor demonstrates correlation to SLE disease activity and is therefore designed to enable rheumatologists to effectively assess and optimize therapeutic intervention in patients diagnosed with SLE. Depending on disease severity, our AVISE® SLE Monitor testing product may be utilized by patients multiple times a year and throughout their lives. We believe AVISE® SLE Monitor will play an increasingly important role in the management of SLE patients and further solidify the role and relationship of AVISE® testing products for these patients.

AVISE® MTX

AVISE® MTX is a patented and validated blood test that precisely measures levels of MTXPG, the active form of methotrexate, in the patient's blood. There is large variability in the way patients absorb and metabolize methotrexate, leaving rheumatologists unsure of what steps to take when a patient has an inadequate response. Methotrexate is the most widely prescribed drug by rheumatologists in the treatment of RA. When faced with a patient who is not responding to methotrexate therapy, the options include increasing the dose, switching to a parenteral delivery method and/or advancing to a more costly biologic therapy. AVISE® MTX provides crucial information as to whether a patient has achieved MTXPG blood levels consistent with an appropriate response to methotrexate, also known as the therapeutic level, or if the MTXPG blood levels are too low to produce adequate effects. The rheumatologists can then make informed therapeutic decisions to optimize methotrexate therapy and give patients their best chance at achieving an optimal response.

AVISE® MTX is compatible with AVISE® Touch, our low-volume test sample collection method that allows for a micro-volume blood sample to be collected anywhere from a simple fingerstick. AVISE® Touch has a number of advantages, including empowering rheumatologists to collect and submit samples without full phlebotomy services, convenience for patients who have trouble with venipuncture and potential patient self-collection.

AVISE® HCQ

AVISE® HCQ is a blood test designed to help rheumatologists objectively monitor levels of hydroxychloroquine, or HCQ, in whole blood as they treat patients with SLE and other CTDs, including RA. HCQ is typically prescribed to patients to control SLE disease activity and prevent flares. However, there is large variability in the response to HCQ therapy, the drug can sometimes take weeks or months to have a therapeutic effect and compliance has been documented to be an issue in CTD patients. We believe measuring HCQ makes the patient accountable, and also helps to determine whether HCQ blood levels are adequate and consistent with clinical efficacy. The addition of new and costly biologic therapies approved for the treatment of SLE may drive interest by all healthcare stakeholders, especially payers, to adopt an approach that optimizes a generic drug before advancing to a costlier alternative. AVISE® HCQ is also compatible with AVISE® Touch.

Test Reports

We provide the results of our AVISE® testing products in a comprehensive and easy-to-understand test report typically sent to rheumatologists within five business days following receipt of the blood specimen. As shown below, the result of the AVISE® Lupus portion of the AVISE® CTD report displays a gradient illustrating the likelihood of the presence of lupus, which facilitates interpretation and discussion of the result with the patient versus only reporting a numerical value.

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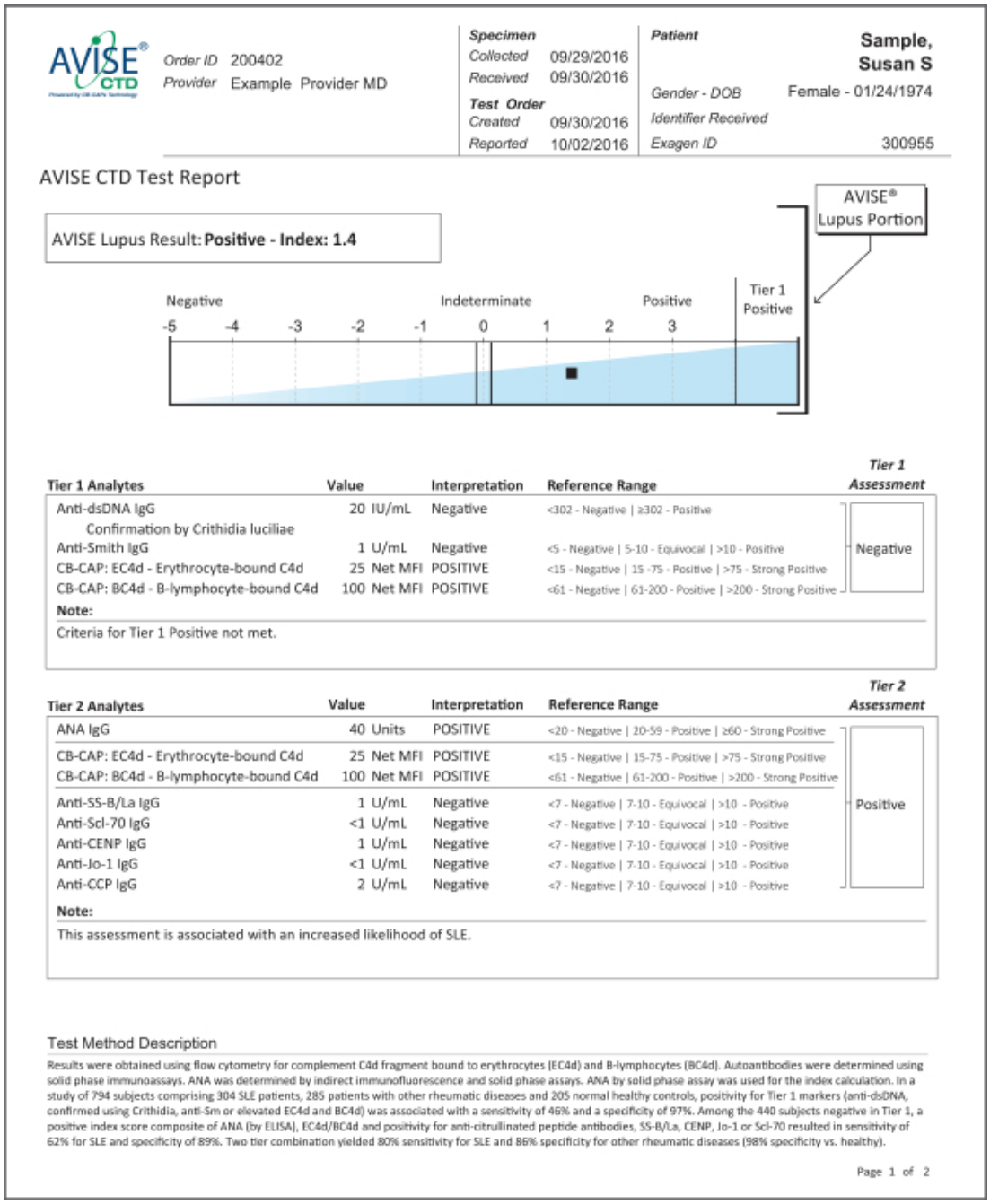
In addition, all biomarker results for AVISE® CTD are reported and organized by disease state, providing clarity and convenience for the rheumatologists. A sample of the full AVISE® CTD report is shown below:

AVISE® CTD Report



AVISE CTD

Order ID 200402
Provider Example Provider MD

Specimen
Collected 09/29/2016
Received 09/30/2016
Test Order
Created 09/30/2016
Reported 10/02/2016

Patient
Sample, Susan S
Gender - DOB Female - 01/24/1974
Identifier Received
Exagen ID 300955

AVISE CTD Test Report

AVISE Lupus Result: **Positive - Index: 1.4**

Tier 1 Analytes	Value	Interpretation	Reference Range	Tier 1 Assessment
Anti-dsDNA IgG	20 IU/mL	Negative	<302 - Negative | ≥302 - Positive	Negative
Confirmation by Crithidia luciliae				
Anti-Smith IgG	1 U/mL	Negative	<5 - Negative | 5-10 - Equivocal | >10 - Positive	
CB-CAP: EC4d - Erythrocyte-bound C4d	25 Net MFI	POSITIVE	<15 - Negative | 15-75 - Positive | >75 - Strong Positive	
CB-CAP: BC4d - B-lymphocyte-bound C4d	100 Net MFI	POSITIVE	<61 - Negative | 61-200 - Positive | >200 - Strong Positive	

Note:
Criteria for Tier 1 Positive not met.

Tier 2 Analytes	Value	Interpretation	Reference Range	Tier 2 Assessment
ANA IgG	40 Units	POSITIVE	<20 - Negative | 20-59 - Positive | ≥60 - Strong Positive	Positive
CB-CAP: EC4d - Erythrocyte-bound C4d	25 Net MFI	POSITIVE	<15 - Negative | 15-75 - Positive | >75 - Strong Positive	
CB-CAP: BC4d - B-lymphocyte-bound C4d	100 Net MFI	POSITIVE	<61 - Negative | 61-200 - Positive | >200 - Strong Positive	
Anti-SS-B/La IgG	1 U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	
Anti-Scl-70 IgG	<1 U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	
Anti-CENP IgG	1 U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	
Anti-Jo-1 IgG	<1 U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	
Anti-CCP IgG	2 U/mL	Negative	<7 - Negative | 7-10 - Equivocal | >10 - Positive	

Note:
This assessment is associated with an increased likelihood of SLE.

Test Method Description

Results were obtained using flow cytometry for complement C4d fragment bound to erythrocytes (EC4d) and B-lymphocytes (BC4d). Autoantibodies were determined using solid phase immunoassays. ANA was determined by indirect immunofluorescence and solid phase assays. ANA by solid phase assay was used for the index calculation. In a study of 794 subjects comprising 304 SLE patients, 285 patients with other rheumatic diseases and 205 normal healthy controls, positivity for Tier 1 markers (anti-dsDNA, confirmed using Crithidia, anti-Sm or elevated EC4d and BC4d) was associated with a sensitivity of 46% and a specificity of 97%. Among the 440 subjects negative in Tier 1, a positive index score composite of ANA (by ELISA), EC4d/BC4d and positivity for anti-citrullinated peptide antibodies, SS-B/La, CENP, Jo-1 or Scl-70 resulted in sensitivity of 62% for SLE and specificity of 89%. Two tier combination yielded 80% sensitivity for SLE and 86% specificity for other rheumatic diseases (98% specificity vs. healthy).

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AVISE® CTD

Order ID 200402
Provider Example Provider MD

Specimen	
Collected	09/29/2016
Received	09/30/2016
Test Order	
Created	09/30/2016
Reported	10/02/2016

Patient	Sample, Susan S
Gender - DOB	Female - 01/24/1974
Identifier Received	
Exagen ID	300955

SLE-Associated Analytes	Value		Interpretation	Reference Range
+ ANA IgG	40	Units	POSITIVE	ELISA: <20 - Negative | 20-59 - Positive | ≥60 - Strong Positive
+ HEp-2 cell fluorescence *Titer:*	1:320		POSITIVE	IFA: <1:80 - Negative | ≥1:80 - Positive
Nuclear Pattern: Speckled				
Cytoplasmic Pattern: Not Observed				
Anti-dsDNA IgG	20	IU/mL	Negative	ELISA: <302 - Negative | ≥302 - Positive
Anti-dsDNA - confirmatory	N/A			IFA - using Crithidia luciliae
Anti-Smith IgG	1	U/mL	Negative	ELISA: <5 - Negative | 5-10 - Equivocal | >10 - Positive
+ CB-CAP: EC4d - Erythrocyte-bound C4d	25	Net MFI	POSITIVE	FACS: <15 - Negative | 15-75 - Positive | >75 - Strong Positive
+ CB-CAP: BC4d - B-lymphocyte-bound C4d	100	Net MFI	POSITIVE	FACS: <61 - Negative | 61-200 - Positive | >200 - Strong Positive

Other Autoimmune Disease Auto-Antibodies	Value		Interpretation	Reference Range
+ Anti-U1RNP IgG	20	U/mL	POSITIVE	ELISA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-RNP70 IgG	3	U/mL	Negative	ELISA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-SS-A/Ro IgG	2	U/mL	Negative	ELISA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-SS-B/La IgG	1	U/mL	Negative	ELISA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-Scl-70 IgG	<1	U/mL	Negative	ELISA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-CENP IgG	1	U/mL	Negative	ELISA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
Anti-Jo-1 IgG	<1	U/mL	Negative	ELISA: <7 - Negative | 7-10 - Equivocal | >10 - Positive

Rheumatoid Arthritis Auto-Antibodies	Value		Interpretation	Reference Range
Rheumatoid Factor IgM	2.0	U/mL	Negative	ELISA: <3.5 - Negative | 3.5-5 - Equivocal | >5 - Positive
Rheumatoid Factor IgA	1	U/mL	Negative	ELISA: <14 - Negative | 14-20 - Equivocal | >20 - Positive
Anti-CCP IgG	2	U/mL	Negative	ELISA: <7 - Negative | 7-10 - Equivocal | >10 - Positive
+ Anti-Carbamylated Protein (CarP) IgG	22	U/mL	POSITIVE	ELISA: <20 - Negative | ≥20 - Positive

Antiphospholipid Syndrome Auto-Antibodies	Value		Interpretation	Reference Range
Anti-Cardiolipin IgM	2	CU	Negative	ELISA: <20 - Negative | ≥20 - Positive
Anti-Cardiolipin IgG	<6	CU	Negative	ELISA: <20 - Negative | ≥20 - Positive
Anti-β2 Glycoprotein 1 IgM	1	CU	Negative	ELISA: <21 - Negative | ≥21 - Positive
Anti-β2 Glycoprotein 1 IgG	<6	CU	Negative	ELISA: <21 - Negative | ≥21 - Positive

Thyroid Auto-Antibodies	Value		Interpretation	Reference Range
Anti-Thyroglobulin IgG	<12	IU/mL	Negative	ELISA: <40 - Negative | 40-60 - Equivocal | >60 - Positive
Anti-Thyroid Peroxidase IgG	<4	IU/mL	Negative	ELISA: <25 - Negative | 25-35 - Equivocal | >35 - Positive

Notes:

In the context of suspected RA, elevated anti-CarP antibodies are associated with more aggressive disease. The significance of a positive anti-CarP value in the absence of RA has not been established.

References

1. Thermo Fisher/Connective Tissue Markers references and results (Phadia product inserts).
2. Manzi S et al. Measurement of erythrocyte C4d and complement receptor 1 in systemic lupus erythematosus. Arthritis Rheum, 50(11):3596-604. 2004.
3. Kalunian et al. Measurement of cell-bound complement activation products enhances diagnostic performance in systemic lupus erythematosus. Arthritis Rheum. 2012 Dec;64(12):4040-7.
4. Putterman C et al. Cell-bound complement activation products in systemic lupus erythematosus: comparison with anti-double-stranded DNA and standard complement measurements. Lupus Science & Medicine 2014;1:e000056

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Exagen®
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CLIA# 05D1075048
CAP# 7201051 | PFI# 8369

Laboratory Directors:
Richard Safrin, MD
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Provider Relations: 888.452.1522

Therapeutics

In December 2018, we entered into the Janssen agreement to exclusively promote SIMPONI® in the United States for the treatment of adult patients with moderate to severe RA and for other indicated rheumatic diseases. Combined U.S. sales of SIMPONI® and SIMPONI ARIA® were approximately $1 billion in 2018.

We began direct promotion of SIMPONI® with our specialized salesforce in January 2019 and we are in the process of expanding our salesforce from 31 representatives as of December 31, 2018 to up to 60 representatives by the end of the first quarter of 2019. This will enable us to deliver approximately 66,000 calls annually to rheumatologists, which we believe will enable us to achieve the optimal reach and frequency, and support our strategy of integrating the promotion of testing products and therapeutics.

Our AVISE® MTX test can identify methotrexate patients with inadequate methotrexate exposure who are potential candidates for SIMPONI® therapy. Our AVISE® Anti-CarP test can identify RA patients with more severe disease requiring more aggressive therapy, such as anti-TNF biologics like SIMPONI®. We believe our strategy of integrating the promotion of testing products and therapeutics, combined with our specialized salesforce, uniquely position us to expand SIMPONI®'s U.S. market share. Under the Janssen agreement, we will be paid on incremental unit sales above a pre-specified baseline for an initial term of 18 months. For more information regarding the Janssen agreement, see "—Agreements with Pharmaceutical Companies."

In recent years, advancements in the understanding of the autoimmune and autoimmune-related disease process have led to a significant number of novel biologic drugs and drug development initiatives, especially in RA and SLE, and we intend to leverage our integrated testing and therapeutics strategy to establish additional partnerships with a focus on the commercialization of therapeutics that are synergistic with our testing products.

Our Pipeline and Growth Opportunities

We believe there is significant potential to capitalize on our proprietary CB-CAPs and MTXPG technologies by integrating those technologies with commercially validated biomarkers to develop testing products with superior clinical utility. The complement pathway is widely implicated in the pathogenesis of a variety of conditions, including autoimmune diseases and organ transplant rejection, and emerging data suggests its implication in cancer development. We believe that our proprietary CB-CAPs technology, owing to its stability and reliability, will allow us to produce meaningful and differentiated proprietary solutions for rheumatologists. For example, we are focused on leveraging our proprietary CB-CAPs technology by developing a thrombosis risk score with PC4d in prognosing cardiovascular events in SLE. We are also initiating proof of concept studies to develop alternatives to biopsy in the monitoring of transplant rejection and the differential diagnosis of fibromyalgia in the primary care physician setting. In addition, we are developing a panel of antibody systems that we believe may have high prognostic value in RA, and we continue to evaluate the use of AVISE® Touch and microfluidics for our broader portfolio of testing products to increase convenience and cost-effectiveness.

Sales and Marketing

Our specialized salesforce is focused on targeting the approximately 5,000 rheumatologists across the United States. Our sales representatives generally have extensive experience in healthcare sales with backgrounds in rheumatology, biologics, specialty therapeutics and/or testing. In addition, our sales representatives complete a comprehensive disease-level sales training program and are required to participate in regular, ongoing training activities and certifications.

Our sales model involves integrating the promotion of testing products and therapeutics in a unique approach that will enable our sales representatives to gain greater access and time with rheumatologists. The test information available to our sales representatives creates a different dynamic as compared to a traditional drug sales representative's product detail. It enables a timely, extended, patient-focused discussion that naturally transitions to a therapeutic discussion during the same sales call. Our goal is for our sales representative to be viewed as a collaborative consultant versus a traditional drug sales representative. We intend to capitalize on our established reputation, market presence and expertise to sell additional products and services into the autoimmune and autoimmune-related disease market. We believe that a collaborative relationship with rheumatologists helps build a lasting sales channel through which additional products and services can be introduced.

As of December 31, 2018, our overall sales team consisted of approximately 42 members, including 31 sales representatives, six regional sales directors, two vice presidents and three managed care professionals. In connection with the promotion of SIMPONI®, we plan to expand to up to 60 sales representatives by the end of the first quarter of 2019, who will be managed by a team of six regional sales directors. Our increased salesforce will allow for expansion into markets not previously covered by us. In addition, this salesforce expansion is estimated to double the number of sales calls made per year, helping us to cultivate a strong collaborative relationship with rheumatologists through increased interactions. To further support our promotional efforts, we have a centralized, dedicated client services department with a high level of technical training that augments our specialized salesforce and marketing activities and enhances sales efficiency and customer satisfaction by providing personalized customer support.

Right Doctor, Right Message, Right Frequency

We believe our sales model of integrating the promotion of testing products and therapeutics will be complemented by our focused "high-touch" selling approach that emphasizes execution in three core areas: *targeting, messaging and call frequency*. We strategically *target* the highest-potential practices by utilizing various data sources (e.g., market analytics, demographic data, historical biologic and diagnostic product usage trends). Furthermore, we believe the increased access afforded by our testing products will allow for patient-focused *messaging,* including safety and efficacy data for SIMPONI® and the increased accuracy of our testing products over current standard of care diagnostic methodologies. Finally, we execute a high-*frequency* promotional strategy for our top targeted rheumatologists and their office personnel to build knowledge, understanding and retention of the benefits of SIMPONI® and our testing products.

We plan to leverage core channels for building awareness and adoption including our participation with multiple patient advocacy organizations, such as the Lupus Foundation of America, or LFA, and medical societies, such as the American College of Rheumatology, or ACR. We have also established strong relationships with multiple rheumatology care management organizations, or super groups, which can be key in influencing favorable reimbursement. Our AVISE® MTX testing product has been included in the clinical guidelines for two of these groups. We believe our experience with advancing a testing product from initial development through clinical adoption differentiates us and uniquely positions us to replicate success with our other testing products. Beyond working with these groups, we intend to continue to augment field selling activity with a balanced marketing mix including print and digital advertising, direct marketing, continuing medical education programs and working with key opinion leaders to support peer-to-peer educational events.

Reimbursement, Clinical Validation and Clinical Utility

Reimbursement

We seek reimbursement for our testing products from several sources, including commercial third-party payers, government payers and patients. Payment from commercial third-party payers differs

depending on whether we have entered into a contract with the payer as a participating provider or do not have a contract and are considered to be an out-of-network provider. When we contract to serve as a participating provider, reimbursements are made pursuant to a percentage of our charges or a negotiated fee schedule amount. Currently, we are reimbursed on an out-of-network basis, at various rates that can be higher or lower than participating providers. Where we are not reimbursed in full, we may elect to appeal the insurer's underpayment or denial of payment or seek payment from the patient. We continue to focus on expanding coverage among existing contracted providers and achieving coverage with commercial payers, laboratory benefit managers and evidence review organizations. We employ a multi-pronged strategy designed to achieve broad coverage and reimbursement for our AVISE® testing products:

- *Meet the evidence standards necessary to be consistent with leading clinical guidelines.* We believe inclusion in leading clinical guidelines plays a critical role in payers' coverage decisions. In order to change clinical guidelines, tests must carry a high level of published evidence demonstrating analytical validity, clinical validity, clinical utility and cost effectiveness. When studies with such evidence are published in peer-reviewed journals, the authors of clinical guidelines may assess the level of evidence and determine whether modifying existing guidelines to include new technology is warranted. For example, we previously conducted peer-reviewed, published clinical studies for AVISE® MTX which helped us secure favorable coverage for that testing product from the MolDx Program, Noridian and various commercial Medicare Advantage plans. The two largest rheumatology super groups have included AVISE® MTX in their respective RA patient pathway guidelines for physician adoption of AVISE® MTX. In addition, UpToDate, a leading evidence-based clinical decision support resource for physicians and payers, recommends the measurement of polyglutamate levels as done by AVISE® MTX. We have conducted, and continue to conduct, clinical validation and clinical utility studies for AVISE® Lupus, which we believe will provide a basis for the ACR and/or UpToDate to consider inclusion of AVISE® Lupus in their respective guidelines. In the future, we also intend to conduct similar studies in order to develop similar supporting literature with respect to our other testing products.
- *Execute an internal managed care policy and claims adjudication function as part of our core business operations.* We employ a team of in-house claims processing and reimbursement specialists who work with patients and payers to obtain maximum reimbursement. In parallel, a managed care team collaborates with our reimbursement specialists to ensure our payer outreach strategy reacts and anticipates the changing needs of our customer base. Our customer service team is an integral part of our reimbursement strategy, working with patients and rheumatologists to navigate the claims process.
- *Cultivate a network of key opinion leaders.* Key opinion leaders are able to influence clinical practice by publishing research and determining whether new tests should be integrated into clinical guidelines. We collaborate with key opinion leaders early in the development process to ensure our clinical studies are designed and executed in a way that clearly demonstrates the benefits of our testing products to physicians and payers.

Clinical Validation

We demonstrated the clinical validity of AVISE® Lupus in a study of 794 patients conducted from 2010 to 2014 across multiple leading academic centers. The primary endpoint of the study was the specificity and sensitivity of AVISE® Lupus compared to common autoantibodies used to diagnose SLE and other CTDs, such as ANA and anti-dsDNA. The final results of this study showed that AVISE® Lupus demonstrated 86% specificity and 80% sensitivity in distinguishing SLE from other CTDs and fibromyalgia, was 33% more specific than ANA (53% specificity/89% sensitivity) and was 48% more sensitive than anti-dsDNA (32% sensitivity/97% specificity).

Clinical Utility

We have collaborated with both academic and community clinicians to demonstrate the clinical utility of AVISE® Lupus versus standard diagnostic tests in physician diagnosis, impact on patient management decisions, patient reported outcomes and health economics.

We sponsored a longitudinal, case-control, retrospective review of medical charts in 2016 to assess the value and clinical utility of AVISE® Lupus to rheumatologists. The results of this study were published in the Open Rheumatology Journal in 2016 and suggested that a positive AVISE® Lupus test aids in the diagnosis of SLE versus standard diagnostic tests.

In early 2018, we initiated CARE for Lupus, a prospective, randomized, multi-site study to assess the performance of AVISE® Lupus versus a number of other standard diagnostic tests. We also plan to initiate the CLEAR study, another prospective, randomized, multi-site study, in conjunction with CareFirst in early 2019 to further demonstrate the clinical utility of AVISE® Lupus, including by collecting and analyzing applicable claims data. In addition, we collaborated with leading health economic experts and clinicians to conduct a health economics study. The results of that health economics study were presented at the ACR conference in 2018 and demonstrated the cost savings to a payer associated with AVISE® Lupus over a one to four year time horizon. We plan to conduct an additional health economics analysis upon the completion of our CARE for Lupus clinical utility study.

We believe our reimbursement strategy, including establishing the clinical validation, clinical utility and health economics of our testing products will allow us to drive an expansion in reimbursement coverage for our testing products.

Laboratory Operations

We perform all of our AVISE® tests in our approximately 8,000 square foot clinical laboratory, which is certified by the Clinical Laboratory Improvement Amendments of 1988, or CLIA, and accredited by the College of American Pathologists, or CAP, and located in Vista, California. Our laboratory is certified for the performance of high-complexity testing by the Centers for Medicare and Medicaid Services, or CMS, in accordance with CLIA. We are approved to offer our products in all 50 states. Our clinical laboratory reports all AVISE® testing product results within five business days. We believe that our existing laboratory facilities are adequate to meet our business needs for at least the next 12 months and that additional laboratory space will be available on commercially reasonable terms, if required.

Quality Assurance

Our quality assurance function oversees the quality of our laboratory as well as research and development, client services, billing, sales and marketing operations. We have established oversight for systems implementation and maintenance procedures, document control processes, supplier qualification, preventive or corrective actions, and employee training processes that we believe achieves excellence in operations. We continuously monitor and improve our processes and procedures and believe this high-quality service leads to customer satisfaction and retention.

Competition

Our principal competition for our AVISE® testing products is traditional methods used by healthcare providers to test patients with CTD disease-like symptoms. Such traditional methods include testing for a broad range of diagnostic, immunology and chemistry biomarkers, such as ANA and anti-dsDNA, and serum complement, such as C3 and C4. We also face competition from commercial laboratories, such as Laboratory Corporation of America Holdings, Quest Diagnostics Incorporated, ARUP Laboratories, Inc. and Mayo Clinic, all of which have existing infrastructures to support the commercialization of diagnostic services. Large, multispecialty group medical clinics, health systems

and academic medical university-based clinics may provide in-house clinical laboratories offering autoimmune and autoimmune-related disease testing services. Additionally, we compete against regional clinical laboratories providing testing in the autoimmune and autoimmune-related disease field, including Rheumatology Diagnostics Laboratories, Inc. Other potential competitors include companies that might develop diagnostic or disease or drug monitoring products, such as Myriad Genetics, Inc., Progentec Diagnostics Inc., Kypha, LLC, Genalyte Inc., Oxford Immunotec, Inc., Protagen AG, DxTerity Diagnostics Inc., HealthTell, Inc. and Immunovia AB. In the future, we may also face competition from companies developing new products or technologies.

Direct competition for the promotion of SIMPONI® includes all other companies with anti-TNF biologics and the marketing companies supporting their distribution and promotion. These products include HUMIRA® from Abbvie Inc., ENBREL® from Amgen Inc., CIMZIA® from UCB, INFLECTRA® from Pfizer Inc., or Pfizer, (biosimilar REMICADE®) and RENFLEXIS® from Merck & Co. (biosimilar REMICADE®). Additional competitors include companies with other biologic drugs indicated for RA that have significant sales or sales potential. Specifically, these include ORENCIA® from Bristol-Myers Squibb Company, ACTEMRA® from Roche Holding AG, or Roche, RITUXAN® from Roche, XELJANZ® from Pfizer, KEVZARA® from Sanofi S.A. and OLUMIANT® from Eli Lilly and Company. There are also several late-stage RA drug and biosimilar development programs and several additional RA products that have minimal sales to date or that are indicated for other rheumatic indications competitive to SIMPONI® such as psoriatic arthritis and ankylosing spondylitis.

We believe the principal competitive factors in our target market include: quality and strength of clinical and analytical validation data; confidence in diagnostic results; safety and efficacy with respect to promoted therapeutics; sales and marketing capabilities; the extent of reimbursement; inclusion in clinical guidelines; cost-effectiveness; and ease of use.

Many of our potential competitors have widespread brand recognition and substantially greater financial, technical and research and development resources and selling and marketing capabilities than we do. Others may develop products with prices lower than ours that could be viewed by rheumatologists and payers as functionally equivalent to our solution or offer solutions at prices designed to promote market penetration, which could force us to lower the list price of our products and affect our ability to achieve profitability. If we are unable to change clinical practice in a meaningful way or compete successfully against current and future competitors, we may be unable to increase market acceptance and sales of our products, which could prevent us from increasing our revenue or achieving profitability and could cause the market price of our common stock to decline.

Agreements with Pharmaceutical Companies

Janssen Agreement

In December 2018, we and Janssen entered into the Janssen agreement to co-promote SIMPONI® in the United States. We are responsible for the costs associated with our salesforce over the course of such co-promotion. Janssen is responsible for all other aspects of the commercialization of SIMPONI® under the Janssen agreement. In exchange for our sales and co-promotional services, we are entitled to a quarterly co-promotion fee based on any increase in total prescribed units of SIMPONI® for that quarter over a predetermined baseline.

The term of the Janssen agreement expires on June 30, 2020, unless extended by us for an additional 18 months upon 180 days' written notice prior to the end of the initial term. Janssen can terminate the agreement at any time for any reason upon 30 days' notice to us, and we can terminate the agreement for any reason at the end of any calendar quarter upon 30 days' notice to Janssen. Either party may terminate the agreement in the event of the other party's default of any of its material obligations under the agreement if such default remains uncured for a specified period of time following receipt of written notice of such default.

Collaboration Agreement with GSK

In January 2018, we entered into a collaboration agreement with GSK, pursuant to which we provide GSK with our test result data to provide market insight into and help increase awareness on the benefits of an early and accurate diagnosis of SLE. The agreement was amended in November 2018 to, among other things, include data from our AVISE® Prognostic and AVISE® HCQ testing products and extend the term of the agreement through December 31, 2019.

Under the agreement, we are required to deliver weekly de-identified data files to GSK covering all data obtained from the performance of certain AVISE® testing products, subject to applicable requirements under the Federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, internal policy requirements and other applicable laws. During the term of the agreement, the data we provide to GSK may not be provided, directly or through a third party, to any other pharmaceutical company that is marketing or developing a product for the treatment of SLE. GSK made a single upfront payment in exchange for the right to receive the applicable data files. In addition, GSK has agreed to create a joint steering committee to cooperate with us in order to raise awareness and physician support for our AVISE® testing products, including through the development and delivery of approved promotional materials and the implementation of a related training plan for each party's sales personnel.

The joint committee will meet at least 120 days prior to the end of the term of the agreement in order to discuss renewal options. Either party may terminate the agreement for breach and, in certain cases, such breach must remain uncured for a certain period of time following receipt of written notice of such breach. In addition, GSK may terminate the agreement immediately if we become insolvent or for convenience upon 60 days' prior written notice.

Master Services Agreement with Horizon Pharma

In August 2018, we entered into a master services agreement with Horizon Pharma, pursuant to which Horizon Pharma utilizes our AVISE® MTX test to report on levels of MTXPG in patients undergoing methotrexate therapy in combination with its anti-gout product KRYSTEXXA® in an ongoing Phase 4 clinical trial. Under the agreement, Horizon Pharma paid an initial one time set-up cost and now pays an incremental fee for each specimen processed. We provide, among other things, specimen collection kits, customized test requisition, pre-paid shipping, specimen storage and individual reports for each study subject. Either party can terminate the agreement for convenience upon 30 days' prior written notice to the other party. Absent early termination, the agreement will run through August 2020.

Intellectual Property Overview

We strive to protect and enhance the proprietary technologies that we believe are important to our business and seek to obtain and maintain patents for any patentable aspects of our testing products and services and any other inventions that are important to the development of our business. Our success will depend on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, inventions and know-how related to our business, to defend and enforce our patents, to maintain our licenses to use intellectual property owned by third parties, to preserve the confidentiality of our trade secrets and to operate without infringing the valid and enforceable patents and other proprietary rights of third parties. We also rely on continuing technological innovation and in-licensing opportunities to develop, strengthen, and maintain our proprietary position in the fields targeted by our testing products and services.

We are the owner or licensee of a portfolio of patents and patent applications and possess substantial know-how and trade secrets which protect various aspects of our business. The patent families comprising our patent portfolio are primarily focused on our AVISE® testing products for the

diagnosis, prognosis and monitoring of autoimmune and autoimmune-related diseases, and are generally directed to CB-CAPs, red blood cell MTXPG exposure assessments, and anti-MCV antibodies. We intend to leverage the intellectual property surrounding our AVISE® testing products as an important component of our business strategy.

Patent Protection for our AVISE® Testing Products

Our portfolio of patents and patent applications related to our AVISE® testing products generally relates to three aspects: CB-CAPs, red blood cell MTXPG exposure assessments, and anti-MCV antibodies. The patent families which we believe are important for the protection of AVISE® are summarized below in the section entitled "—License Agreements."

CB-CAPs.

We are the exclusive licensee of five patent families related to CB-CAPs technology from the University of Pittsburgh, or UPitt. We expect that these patent families (U.S. Patent Nos. 7,361,517; 7,390,631; 7,585,640; 7,588,905; 8,080,382; and 8,126,654) will expire in 2024 or 2025. A foreign patent corresponding to U.S. Patent No. 7,361,517 has issued in Europe (EP 1,756,571). Foreign patents corresponding to U.S. Patent No. 7,390,631 have issued in Japan (JP 4570872 and JP 4906898). Foreign patents corresponding to U.S. Patent No. 7,585,640 have issued in Australia (AU 2005242719) and Canada (CA 2,564,492). A foreign patent corresponding to U.S. Patent Nos. 7,588,905 and 8,126,654 has issued in Japan (JP 4550051). We also own one issued patent (US 10,132,813) and two pending patent application families that relate to our AVISE® Lupus products. Foreign patents corresponding to US 10,132,813 have issued in Europe (EP 2,673,644) and Japan (JP 5,990,542). In order to manage our foreign filing costs and focus on the U.S. market, we made the decision to cease the prosecution and maintenance of several of our foreign patents and patent applications related to our CB-CAPs technology, including EP 1,432,731; EP 1,618,379; EP 1,635,692; EP 1,745,287; EP 2,214,014; EP 2,216,650, and certain of their corresponding family members.

MTX Exposure Assessment Products and Services

We are the exclusive licensee of four patents that relate to our AVISE® MTX product and methods for monitoring methotrexate therapy using red blood cell MTXPG exposure assessments. These patents and patent applications are owned by Prometheus and are exclusively licensed to us for all uses except for use in gastrointestinal diseases. These patents include U.S. Patent Nos. 6,921,667; 7,563,590; 7,582,282 and 7,695,908, which are expected to expire between 2023 and 2027. We also are the exclusive licensee of two issued US patents (US 9,261,509 and US 9,822,391) that relate to our AVISE® MTX product.

Proprietary Rights and Processes

We may rely, in some circumstances, on proprietary technology and processes (including trade secrets) to protect our technology. However, these can be difficult to protect. We seek to protect our proprietary technology and processes, in part, by entering into confidentiality agreements with those who have access to our confidential information, including our employees, consultants, scientific advisors and contractors. We also seek to preserve the integrity and confidentiality of our proprietary technology and processes by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any such breach. In addition, our proprietary technology and processes may otherwise become known or be independently discovered by competitors. To the extent that our employees, consultants, scientific advisors, contractors, or any future collaborators use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. For this and more comprehensive risks related to our proprietary technology and processes, please see "Risk Factors—Risks Related to our Intellectual Property."

License Agreements

Amended and Restated Exclusive License Agreement with the University of Pittsburgh

In August 2011, we entered into an amended and restated exclusive license agreement with UPitt, to amend and restate the exclusive license agreement we obtained by our purchase of the medical diagnostics division of Cypress Bioscience, Inc., or Cypress, in 2010, or the Cypress Purchase, and to obtain an exclusive license to UPitt's patent rights in certain inventions, or the UPitt Patent Rights, related to the use of CB-CAPs technology in the diagnosis, prognosis and monitoring of diseases, including certain patents related to our AVISE® testing products. The agreement was amended three times, once in May 2012 to, among other things, limit the territory of the license to the United States and exclude certain foreign patents and applications from the agreement, once in September 2013 to add (1) an additional U.S. patent to the UPitt Patent Rights licensed under the agreement and (2) the field of monitoring of organ transplantation and organ rejection to the scope of the license, and once in June 2016 to, among other things, clarify the definition of combination products for determining royalties due under the license.

Under the agreement, we are permitted to make, use and sell products and services utilizing the UPitt Patent Rights in the field of SLE and the field of monitoring of organ transplantation and organ rejection, and to sublicense such rights. UPitt retained the right to practice under the UPitt Patent Rights and to use such rights for non-commercial education and research purposes. In addition, this agreement is subject to the rights of the United States government, if any, as set forth in 35 U.S.C. §200, et seq. Pursuant to this law, the U.S. government may have acquired a nonexclusive, nontransferable, paid up license to practice or have practiced for or on behalf of the U.S. government the inventions described in the UPitt Patent Rights throughout the world.

In consideration for the rights granted to us under the agreement, we made certain upfront payments to UPitt on the first and second anniversaries of the agreement that increased on the third and subsequent anniversaries of the agreement until the first sale of products or services utilizing the UPitt Patent Rights. We are required to pay UPitt a low single-digit royalty on net sales of products or services utilizing the UPitt Patent Rights sold by us or our affiliates, subject to minimum annual royalty payments and other adjustment in certain circumstances. We also made a $0.2 million milestone payment to UPitt with the achievement of certain levels of net sales which we met in 2014. Our royalty obligations continue for each licensed product or service on a country-by-country basis until the expiration of the last licensed patent covering the applicable licensed product or service in such country.

In the event we sublicense any of the UPitt Patent Rights, we are obligated to pay UPitt a low single-digit percentage sublicense royalty on net sales of products or services sold by our sublicensees that utilize the sublicensed UPitt Patent Rights and a low double-digit percentage of all non-royalty sublicensing income received by us.

The agreement requires that we diligently develop and commercialize products that are covered by the UPitt Patent Rights, and we have agreed to meet certain development and commercial milestones. UPitt may terminate the agreement if we fail to meet such milestones. In addition, if we fail to meet a milestone relating to development of the UPitt Patent Rights in the monitoring of organ transplantation and organ rejection field, UPitt may remove that field from our licensed rights. We are currently in compliance with these milestone requirements.

We may terminate the agreement upon six months' written notice to UPitt. UPitt may terminate the agreement in the event of our nonperformance of any of our obligations under the agreement if such nonperformance remains uncured for a certain period of time following our receipt of written notice of such nonperformance or in the event of our insolvency. Absent early termination, the agreement will continue until the expiration date of the longest-lived patent right included in the UPitt Patent Rights.

Exclusive License Agreement with the University of Pittsburgh

We made an economic decision to cease the maintenance and licensing of UPitt Patent Rights outside the United States, which led to such rights returning to UPitt. We subsequently made the determination to re-license these foreign patent rights from UPitt, but at the time of re-licensing these patent rights, a number of the foreign patent rights had permanently lapsed. Accordingly, in September 2013, we entered into an exclusive license agreement with UPitt to obtain an exclusive license to UPitt's remaining ex-U.S. patent rights in certain inventions, or the ex-U.S. UPitt Patent Rights, related to the use of CB-CAPs technology in the diagnosis, prognosis and monitoring of diseases, including certain patents related to our AVISE® testing products.

Under the agreement, we are permitted to make, use and sell products and services utilizing the ex-U.S. UPitt Patent Rights in the field of SLE and the field of monitoring of organ transplantation and organ rejection outside of the United States, and to sublicense such rights. UPitt retained the right to practice under the ex-U.S. UPitt Patent Rights and to use such rights for non-commercial education and research purposes. In addition, this agreement is subject to the rights of the U.S. government, if any, as set forth in 35 U.S.C. §200, et seq.

In consideration for the rights granted to us under the agreement, we paid an initial license fee to UPitt. We are also required to pay UPitt a low single-digit royalty on net sales of products or services utilizing the ex-U.S. UPitt Patent Rights sold by us or our affiliates, subject to adjustment in certain circumstances. Our royalty obligations continue for each licensed product or service on a country-by-country basis until the expiration of the last licensed patent covering the applicable licensed product or service in such country.

In the event we sublicense any of the ex-U.S. UPitt Patent Rights, we are obligated to pay UPitt a low single-digit percentage sublicense royalty on net sales of products or services sold by our sublicensees that utilize the sublicensed ex-U.S. UPitt Patent Rights and a low double-digit percentage of all non-royalty sublicensing income received by us.

The agreement requires that we diligently develop and commercialize products that are covered by the ex-U.S. UPitt Patent Rights, and we have agreed to meet certain commercial milestones. UPitt may terminate the agreement if we fail to meet such milestones. We are currently in compliance with these milestone requirements.

We may terminate the agreement upon six months' written notice to UPitt. UPitt may terminate the agreement in the event of our nonperformance of any of our obligations under the agreement if such nonperformance remains uncured for a certain period of time following our receipt of written notice of such nonperformance or in the event of our insolvency. Absent early termination, the agreement will continue until the expiration date of the longest-lived patent right included in the UPitt Patent Rights.

License Agreement with Prometheus Laboratories, Inc.

In connection with the Cypress Purchase, we acquired a license agreement, dated September 2007, between Prometheus Laboratories, Inc., or Prometheus, and Proprius Pharmaceuticals, Inc., or Proprius, a company which had been previously acquired by Cypress. Pursuant to this agreement, we obtained an exclusive, worldwide license to Prometheus's patent rights in certain inventions, or the Prometheus Patent Rights, related to the diagnosis, prognosis and monitoring of diseases, including certain patents related to our AVISE® testing products and services. This agreement was subsequently amended in October 2013.

Under the agreement, we are permitted to research, develop, manufacture and commercialize products utilizing the Prometheus Patent Rights and to sublicense such rights; provided, however, that

any such sublicenses may only be granted with Prometheus's consent. We are not permitted to develop or commercialize products utilizing the Prometheus Patent Rights for use in diagnosing or treating any gastrointestinal diseases or to promote any such products to gastroenterologists. Pursuant to the agreement, we are obligated to use reasonable commercial efforts to undertake certain development activities with respect to products utilizing the Prometheus Patent Rights, including the completion of certain clinical studies. In addition, in the event that we do not timely complete these studies or approved substitute studies, we will become obligated to pay to Prometheus a one-time payment of $50,000.

We are required to make a milestone payment of $2.0 million upon the achievement of certain net sales. In addition, we are required to pay Prometheus tiered royalties in the mid-single-digit range on sales of any products utilizing the Prometheus Patent Rights by us, our affiliates or our sublicensees. Our royalty obligations continue on a licensed-product-by-licensed-product and country-by-country basis until the expiration, lapse or invalidation of the last valid claim in a licensed patent covering the applicable licensed product in such country.

In the event we sublicense any of the Prometheus Patent Rights, we are obligated to pay to Prometheus a fee based on a percentage of sublicense fees received by us, which percentage is in the mid-twenties. In addition, we are also required to pay to Prometheus a percentage of the royalty payments we receive from our sublicensees, which may not be less than a certain low single-digit percentage of net sales of products or services sold by our sublicensees that utilize the sublicensed Prometheus Patent Rights, nor more than a certain mid-single digit percentage of such net sales.

We may unilaterally terminate the agreement for any reason upon 60-days' written notice to Prometheus. Either party may terminate the agreement in the event of the other party's material breach of the agreement if such breach remains uncured for a certain period of time following receipt of written notice of such breach or in the event of the other party's insolvency. Absent early termination, the agreement will continue until the expiration date of the longest-lived patent right included in the Prometheus Patent Rights.

Asset Purchase Agreement with Cypress (Royalty Pharma) and Proprius

In October 2010, we completed the Cypress Purchase pursuant to an asset purchase agreement with Cypress and its wholly-owned subsidiary, Proprius, under which we obtained certain assets related to our AVISE® testing products and services. The agreement was amended six times, once in March 2011 to change certain obligations relating to certain accounts receivable we acquired from Cypress, once in August 2012 to convert a one-time payment obligation to a payment plan over four years with interest, once in February 2013 to convert a one-time contingent milestone payment obligation concerning a CB-CAPs monitoring assay to a payment plan over two years with interest, once in October 2013 to, among other things, provide consent for Exagen to use its IP as collateral on a financing round, once in January 2016 to restate an annual sales milestone, and once in February 2017 to restate specifics of the monitoring assay royalty.

In 2011, Royalty Pharma Collection Trust, or Royalty Pharma, acquired Cypress and became its successor-in-interest under the agreement. In consideration for the acquisition, we made certain initial cash payments to Cypress and we are currently making payments to Royalty Pharma, as a successor-in-interest to Cypress, pursuant to the August 2012 amendment, which payments are subject to acceleration in certain circumstances. Under our agreements with Royalty Pharma, we are required to pay Royalty Pharma a low double-digit royalty on the world wide net sales of CB-CAPs products and a low double-digit royalty on the net sales of certain new products in each case, for a period of eight years.

In addition, we are required to make certain one-time contingent milestone payments for two third-party commercial programs, for the launch of a CB-CAPs monitoring assay, and for the achievement of

an annual, worldwide net sales level for CB-CAPs products. Our agreement with Royalty Pharma requires that we use commercially reasonable efforts to cause each of the milestones to be achieved. In December 2015, we achieved the specified annual world-wide nets sales of CB-CAPs products which required us to make a $2.0 million milestone payment to Royalty Pharma. We paid the applicable $2.0 million milestone payment in 2016. In February 2017, we amended our agreements with Royalty Pharma relating to the launch of a monitoring product using CB-CAPs technology. As a result of this amendment, a prior obligation to make a one-time payment of $1.0 million upon the launch of a monitoring product incorporating CB-CAPs technology was replaced with an agreement to pay Royalty Pharma a one-time payment of $100,000 upon the launch of such a product, plus a 2.5% royalty based on future cash collections from sales of that product which incorporate the licensed technology. Future royalties under this arrangement are limited to the lesser of $1,200,000 (including the upfront payment of $100,000) or the total royalty earned through January 1, 2024.

Asset Purchase Agreement With Cellatope

In connection with the Cypress Purchase, we acquired an asset purchase agreement, dated February 2009 and amended December 2012 and again in January 2017, between Cypress and Cellatope Corporation, or Cellatope. Pursuant to the amended agreement, we obtained assets related to our AVISE® testing products. In connection with one launch of our AVISE® SLE Monitor testing product, we paid an upfront payment of $100,000 and we are required to pay Cellatope a low-single digit royalty on net sales up to a maximum of $3.0 million.

Dr. Thierry Dervieux and De Novo Diagnostics, Inc.

In September 2011, we entered into a license agreement with Dr. Thierry Dervieux, our Chief Scientific Officer, and his company De Novo Diagnostics, Inc., under which we obtained an exclusive, worldwide (except for Australia and New Zealand) license to Dr. Dervieux's patent rights and know-how in certain inventions, or the Dervieux Patent Rights, related to the diagnosis, prognosis and monitoring of diseases, including certain patents related to our AVISE® testing products and services.

Under the agreement, we are permitted to develop, manufacture and commercialize products utilizing the Dervieux Patent Rights in the human healthcare market, and to sublicense such rights.

In considerations for the rights granted to us under the agreement, we are required to make milestone payments, up to an aggregate of $600,000, upon achievement of certain sales milestones. In addition, we are required to pay Dr. Dervieux a mid-single-digit royalty on net sales by us or our affiliates of any products utilizing the Dervieux Patent Rights, subject to adjustment in certain circumstances. We are also obligated to pay Dr. Dervieux a percentage in the mid-twenties of sublicense fees and royalties received by us.

The agreement requires that we diligently develop and commercialize products that are covered by the Dervieux Patent Rights, and we have agreed to use commercially reasonable efforts to bring technology covered by the Dervieux Patent Rights to market as soon as practicable.

We may unilaterally terminate the agreement upon 12 months' written notice to Dr. Dervieux. Either party may terminate this agreement in the event of the other party's nonperformance of any of its obligations under the agreement if such nonperformance remains uncured for a specified period of time following receipt of written notice of such nonperformance or in the event of the other party's insolvency. Absent early termination, the agreement will continue until the expiration date of the longest-lived patent right included in the Dervieux Patent Rights.

Regulations

Clinical Laboratory Improvement Amendments of 1988

As a clinical reference laboratory, we are required to hold certain federal, state and local licenses, certifications and permits to conduct our business. Under CLIA, we are required to hold a certificate applicable to the type of laboratory tests we perform and to comply with standards applicable to our operations, including test processes, personnel, facilities administration, equipment maintenance, recordkeeping, quality systems and proficiency testing. We must maintain CLIA compliance and certification to be eligible to bill for diagnostic services provided to Medicare beneficiaries.

We have current certification under CLIA to perform testing at our Vista facility. To renew our CLIA certificate, we are subject to survey and inspection every two years to assess compliance with program standards. The regulatory and compliance standards applicable to the testing we perform may change over time, and any such changes could have a material effect on our business.

Penalties for non-compliance with CLIA requirements include suspension, limitation or revocation of the laboratory's CLIA certificate, as well as directed plan of correction, state on-site monitoring, civil money penalties, civil injunctive suit or criminal penalties.

State Laboratory Licensing

In addition to federal certification requirements of laboratories under CLIA, licensure is required and maintained for our Vista clinical reference laboratory under California law. Such laws establish standards for the day-to-day operation of a clinical reference laboratory, including the training and skills required of personnel and quality control. In addition, California laws mandate proficiency testing, which involves testing of specimens that have been specifically prepared for the laboratory.

Because we receive specimens from New York, our clinical reference laboratory is required to be licensed by New York, under New York laws and regulations, which establish standards for:

- day-to-day operation of a clinical laboratory, including training and skill levels required of laboratory personnel;
- physical requirements of a facility;
- equipment; and
- validation and quality control.

New York law also mandates proficiency testing for laboratories licensed under New York state law, regardless of whether such laboratories are located in New York. If a laboratory is out of compliance with New York statutory or regulatory standards, the New York Department of Health, or NYDOH, may suspend, limit, revoke or annul the laboratory's New York license, censure the holder of the license or assess civil money penalties. Statutory or regulatory noncompliance may result in a laboratory's operator being found guilty of a misdemeanor under New York law. NYDOH also must approve the LDT before the test is offered in New York. We have received written approval from NYDOH to offer our products in New York.

In addition to New York and California, other states, including Maryland, Pennsylvania and Rhode Island, require licensing of out-of-state laboratories under certain circumstances.

Federal Oversight of Laboratory Developed Tests

The laws and regulations governing the marketing of diagnostic products are evolving, extremely complex, and in many instances, there are no significant regulatory or judicial interpretations of these

laws and regulations. Clinical laboratory tests like AVISE® CTD, AVISE® SLE Prognostic and AVISE® MTX are regulated under CLIA, as administered by CMS, as well as by applicable state laws. In addition, the Federal Food, Drug and Cosmetic Act, or FDCA, defines a medical device to include any instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including a component part, or accessory, intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals. Our in vitro testing products are considered by the FDA to be subject to regulation as medical devices. Among other things, pursuant to the FDCA and its implementing regulations, the FDA regulates the research, testing, manufacturing, safety, labeling, storage, recordkeeping, pre-market clearance or approval, marketing and promotion, and sales and distribution of medical devices in the United States to ensure that medical products distributed domestically are safe and effective for their intended uses. In addition, the FDA regulates the export of medical devices manufactured in the United States to international markets.

Although the FDA has statutory authority to assure that medical devices are safe and effective for their intended uses, the FDA has generally exercised its enforcement discretion and not enforced applicable regulations with respect to in vitro diagnostics that are designed, manufactured, and used within a single laboratory for use only in that laboratory. These tests are referred to as laboratory developed tests, or LDTs. We believe that the AVISE® CTD and AVISE® MTX are LDTs, as are our near-term pipeline candidate tests. As a result, we believe many of our diagnostic services are currently subject to the FDA's enforcement discretion and are not subject to the FDA's oversight. However, reagents, instruments, software or components provided by third parties and used to perform LDTs may be subject to regulation.

In recent years, FDA has stated its intention to modify its enforcement discretion policy with respect to LDTs. For example, on July 31, 2014, the FDA notified Congress of its intent to modify, in a risk-based manner, its policy of enforcement discretion with respect to LDTs. On October 3, 2014, the FDA issued two draft guidance documents entitled "Framework for Regulatory Oversight of Laboratory Developed Tests (LDTs)," or the Framework Guidance, and "FDA Notification and Medical Device Reporting for Laboratory Developed Tests (LDTs)," or the Reporting Guidance. The Framework Guidance states that FDA intends to modify its policy of enforcement discretion with respect to LDTs in a risk-based manner consistent with the classification of medical devices generally in Classes I through III. The FDA further states its intention in the Framework Guidance to publish general LDT classification guidance within 18 months of date on which the Framework Guidance is finalized. The Reporting Guidance would further enable FDA to collect information regarding the LDTs currently being offered for clinical use through a notification process, as well as to enforce its regulations for reporting safety issues and collecting information on any known or suspected adverse events related to the use of an LDT.

Although the FDA halted finalization of the guidance in November 2016 to allow for further public discussion on an appropriate oversight approach to LDTs and to give congressional authorizing committees the opportunity to develop a legislative solution, the FDA could ultimately modify its current approach to LDTs in a way that would subject our products marketed as LDTs to the enforcement of regulatory requirements. Moreover, legislative measures have recently been proposed in Congress that, if ultimately enacted, could provide the FDA with additional authority to require premarket review of and regulate LDTs.

Medical Device Regulatory Framework

Although we currently market our proprietary testing products as LDTs, which are currently subject to enforcement discretion, we could be subject to more onerous FDA compliance obligations in the future. Specifically, if the FDA begins to actively regulate LDTs, then, unless an exemption applies, each new or significantly modified medical device we seek to commercially distribute in the U.S. will

require either a premarket notification to the FDA requesting permission for commercial distribution under Section 510(k) of the FDCA, also referred to as a 510(k) clearance, or approval from the FDA of a premarket approval, or PMA, application. Both the 510(k) clearance and PMA processes can be resource intensive, expensive, and lengthy, and require payment of significant user fees.

Device Classification

Under the FDCA, medical devices are classified into one of three classes-Class I, Class II or Class III depending on the degree of risk associated with each medical device and the extent of control needed to provide reasonable assurances with respect to safety and effectiveness.

Class I includes devices with the lowest risk to the patient and are those for which safety and effectiveness can be reasonably assured by adherence to a set of FDA regulations, referred to as the General Controls for Medical Devices, which require compliance with the applicable portions of the FDA's quality system regulation, or QSR, facility registration and product listing, reporting of adverse events and malfunctions, and appropriate, truthful and non-misleading labeling and promotional materials. Some Class I devices also require premarket clearance by the FDA through the 510(k) premarket notification process described below. Most Class I products are exempt from the premarket notification requirements.

Class II devices are those that are subject to the General Controls, and special controls as deemed necessary by the FDA to ensure the safety and effectiveness of the device. These special controls can include performance standards, patient registries, FDA guidance documents and post-market surveillance. Most Class II devices are subject to premarket review and clearance by the FDA. Premarket review and clearance by the FDA for Class II devices is accomplished through the 510(k) premarket notification process.

Class III devices include devices deemed by the FDA to pose the greatest risk such as life-supporting or life-sustaining devices, or implantable devices, in addition to those deemed novel and not substantially equivalent following the 510(k) process. The safety and effectiveness of Class III devices cannot be reasonably assured solely by the General Controls and Special Controls described above. Therefore, these devices are subject to the PMA application process, which is generally more costly and time-consuming than the 510(k) process. Through the PMA application process, the applicant must submit data and information demonstrating reasonable assurance of the safety and effectiveness of the device for its intended use to the FDA's satisfaction. Accordingly, a PMA typically includes, but is not limited to, extensive technical information regarding device design and development, pre-clinical and clinical trial data, manufacturing information, labeling and financial disclosure information for the clinical investigators in device studies. The PMA application must provide valid scientific evidence that demonstrates to the FDA's satisfaction a reasonable assurance of the safety and effectiveness of the device for its intended use.

The Investigational Device Process

In the U.S., absent certain limited exceptions, human clinical trials intended to support medical device clearance or approval require an IDE application. Some types of studies deemed to present "non-significant risk" are deemed to have an approved IDE once certain requirements are addressed and IRB approval is obtained. If the device presents a "significant risk" to human health, as defined by the FDA, the sponsor must submit an IDE application to the FDA and obtain IDE approval prior to commencing the human clinical trials. The IDE application must be supported by appropriate data, such as animal and laboratory testing results, showing that it is safe to test the device in humans and that the testing protocol is scientifically sound. Generally, clinical trials for a significant risk device may begin once the IDE application is approved by the FDA and the study protocol and informed consent are approved by appropriate IRBs at the clinical trial sites. Submission of an IDE will note necessarily

result in the ability to commence clinical trials, and although the FDA's approval of an IDE allows clinical testing to go forward for a specified number of subjects, it does not bind the FDA to accept the results of the trial as sufficient to prove the product's safety and efficacy, even if the trial meets its intended success criteria.

All clinical trials must be conducted in accordance with the FDA's IDE regulations that govern investigational device labeling, prohibit promotion and specify an array of recordkeeping, reporting and monitoring responsibilities of study sponsors and study investigators. Clinical trials must further comply with the FDA's good clinical practice regulations for IRB approval and for informed consent and other human subject protections. Required records and reports are subject to inspection by the FDA. The results of clinical testing may be unfavorable, or, even if the intended safety and efficacy success criteria are achieved, may not be considered sufficient for the FDA to grant marketing approval or clearance of a product. The commencement or completion of any clinical trial may be delayed or halted, or be inadequate to support approval of a PMA application, for numerous reasons, including, but not limited to, the following:

- the FDA or other regulatory authorities do not approve a clinical trial protocol or a clinical trial, or place a clinical trial on hold;
- patients do not enroll in clinical trials at the rate expected;
- patients do not comply with trial protocols;
- patient follow-up is not at the rate expected;
- patients experience adverse events;
- patients die during a clinical trial, even though their death may not be related to the products that are evaluated during the trial;
- device malfunctions occur with unexpected frequency or potential adverse consequences;
- side effects or device malfunctions of similar products already in the market that change the FDA's view toward approval of new or similar PMAs or result in the imposition of new requirements or testing;
- institutional review boards and third-party clinical investigators may delay or reject the trial protocol;
- third-party clinical investigators decline to participate in a trial or do not perform a trial on the anticipated schedule or consistent with the clinical trial protocol, investigator agreement, investigational plan, good clinical practices, the IDE regulations or other FDA or IRB requirements;
- third-party investigators are disqualified by the FDA;
- we or third-party organizations do not perform data collection, monitoring and analysis in a timely or accurate manner or consistent with the clinical trial protocol or investigational or statistical plans, or otherwise fail to comply with the IDE regulations governing responsibilities, records and reports of sponsors of clinical investigations;
- third-party clinical investigators have significant financial interests related to us or our study such that the FDA deems the study results unreliable, or we or investigators fail to disclose such interests;
- regulatory inspections of our clinical trials or manufacturing facilities, which may, among other things, require us to undertake corrective action or suspend or terminate our clinical trials;
- changes in government regulations or administrative actions;
- the interim or final results of the clinical trial are inconclusive or unfavorable as to safety or efficacy; or
- the FDA concludes that our trial designs are unreliable or inadequate to demonstrate safety and efficacy.

The 510(k) Clearance Process

Under the 510(k) clearance process, the manufacturer must submit to the FDA a premarket notification, demonstrating that the device is "substantially equivalent" to a legally marketed predicate device. A predicate device is a legally marketed device that is not subject to a PMA, i.e., a device that was legally marketed prior to May 28, 1976 (pre-amendments device) and for which a PMA is not required, a device that has been reclassified from Class III to Class II or I, or a device that was previously found substantially equivalent through the 510(k) process. To be "substantially equivalent," the proposed device must have the same intended use as the predicate device, and either have the same technological characteristics as the predicate device or have different technological characteristics and not raise different questions of safety or effectiveness than the predicate device. Clinical data is sometimes required to support substantial equivalence.

After a 510(k) premarket notification is submitted, the FDA determines whether to accept it for substantive review. If it lacks necessary information for substantive review, the FDA will refuse to accept the 510(k) notification. If it is accepted for filing, the FDA begins a substantive review. By statute, the FDA is required to complete its review of a 510(k) notification within 90 days of receiving the 510(k) notification. As a practical matter, clearance often takes longer, and clearance is never assured. Although many 510(k) premarket notifications are cleared without clinical data, the FDA may require further information, including clinical data, to make a determination regarding substantial equivalence, which may significantly prolong the review process. If the FDA agrees that the device is substantially equivalent, it will grant clearance to commercially market the device.

If the FDA determines that the device is not "substantially equivalent" to a predicate device, or if the device is automatically classified into Class III, the device sponsor must then fulfill the much more rigorous premarketing requirements of the PMA approval process, or seek reclassification of the device through the de novo process. The de novo classification process is an alternate pathway to classify medical devices that are automatically classified into Class III but which are low to moderate risk. A manufacturer can submit a petition for direct de novo review if the manufacturer is unable to identify an appropriate predicate device and the new device or new use of the device presents a moderate or low risk. De novo classification may also be available after receipt of a "not substantially equivalent" letter following submission of a 510(k) to FDA.

After a device receives 510(k) clearance, any modification that could significantly affect its safety or effectiveness, or that would constitute a new or major change in its intended use, will require a new 510(k) clearance or, depending on the modification, could require a PMA application. The FDA requires each manufacturer to determine whether the proposed change requires a new submission in the first instance, but the FDA can review any such decision and disagree with a manufacturer's determination. Many minor modifications are accomplished by a letter-to-file in which the manufacture documents the change in an internal letter-to-file. The letter-to-file is in lieu of submitting a new 510(k) to obtain clearance for such change. The FDA can always review these letters to file in an inspection. If the FDA disagrees with a manufacturer's determination regarding whether a new premarket submission is required for the modification of an existing 510(k)-cleared device, the FDA can require the manufacturer to cease marketing and/or recall the modified device until 510(k) clearance or approval of a PMA application is obtained. In addition, in these circumstances, the FDA can impose significant regulatory fines or penalties for failure to submit the requisite application(s).

The PMA Approval Process

Following receipt of a PMA application, the FDA conducts an administrative review to determine whether the application is sufficiently complete to permit a substantive review. If it is not, the agency will refuse to file the PMA. If it is, the FDA will accept the application for filing and begin the review. The FDA has 180 days to review a filed PMA application, although the review of an application more often

occurs over a significantly longer period of time. During this review period, the FDA may request additional information or clarification of information already provided, and the FDA may issue a major deficiency letter to the applicant, requesting the applicant's response to deficiencies communicated by the FDA.

Before approving or denying a PMA, an FDA advisory committee may review the PMA at a public meeting and provide the FDA with the committee's recommendation on whether the FDA should approve the submission, approve it with specific conditions, or not approve it. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Prior to approval of a PMA, the FDA may conduct inspections of the clinical trial data and clinical trial sites, as well as inspections of the manufacturing facility and processes. Overall, the FDA review of a PMA application generally takes between one and three years, but may take significantly longer. The FDA can delay, limit or deny approval of a PMA application for many reasons, including:

- the device may not be shown safe or effective to the FDA's satisfaction;
- the data from pre-clinical studies and/or clinical trials may be found unreliable or insufficient to support approval;
- the manufacturing process or facilities may not meet applicable requirements; and
- changes in FDA approval policies or adoption of new regulations may require additional data.

If the FDA evaluation of a PMA is favorable, the FDA will issue either an approval letter, or an approvable letter, the latter of which usually contains a number of conditions that must be met in order to secure final approval of the PMA. When and if those conditions have been fulfilled to the satisfaction of the FDA, the agency will issue a PMA approval letter authorizing commercial marketing of the device, subject to the conditions of approval and the limitations established in the approval letter. If the FDA's evaluation of a PMA application or manufacturing facilities is not favorable, the FDA will deny approval of the PMA or issue a not approvable letter. The FDA also may determine that additional tests or clinical trials are necessary, in which case the PMA approval may be delayed for several months or years while the trials are conducted and data is submitted in an amendment to the PMA, or the PMA is withdrawn and resubmitted when the data are available. The PMA process can be expensive, uncertain and lengthy and a number of devices for which the FDA approval has been sought by other companies have never been approved by the FDA for marketing.

New PMA applications or PMA supplements are required for modification to the manufacturing process, equipment or facility, quality control procedures, sterilization, packaging, expiration date, labeling, device specifications, ingredients, materials or design of a device that has been approved through the PMA process. PMA supplements often require submission of the same type of information as an initial PMA application, except that the supplement is limited to information needed to support any changes from the device covered by the approved PMA application and may or may not require as extensive technical or clinical data or the convening of an advisory panel, depending on the nature of the proposed change.

In approving a PMA application, as a condition of approval, the FDA may also require some form of post-approval study or post-market surveillance, whereby the applicant conducts a follow-up study or follows certain patient groups for a number of years and makes periodic reports to the FDA on the clinical status of those patients when necessary to protect the public health or to provide additional or longer term safety and effectiveness data for the device. The FDA may also approve a PMA application with other post-approval conditions intended to ensure the safety and effectiveness of the device, such as, among other things, restrictions on labeling, promotion, sale, distribution and use.

New PMA applications or PMA supplements may also be required for modifications to any approved diagnostic tests, including modifications to our manufacturing processes, device labeling and device design, based on the findings of post-approval studies.

Federal and State Physician Self-Referral Prohibitions

We are subject to the federal physician self-referral prohibitions, commonly known as the Stark Law, and to similar state law restrictions, such as California's Physician Ownership and Referral Act, or PORA, and other comparable state laws. Together these restrictions generally prohibit us from billing a patient or any governmental or private payer for certain designated health services, including clinical laboratory services, when the physician ordering the service, or any member of such physician's immediate family, has a financial interest, such as an ownership or investment interest in or compensation arrangement with us, unless the arrangement meets an exception to the prohibition.

Sanctions for a Stark Law violation include the following:

- denial of payment for the services provided in violation of the prohibition;
- refunds of amounts collected by an entity in violation of the Stark Law;
- a civil penalty of up to $24,748 for each bill or claim for a service arising out of the prohibited referral;
- the imposition of up to three times the amounts for each item or service wrongfully claimed;
- possible exclusion from federal healthcare programs, including Medicare and Medicaid; and
- a civil penalty of up to $164,992 for each arrangement or scheme that the parties know (or should know) has the principal purpose of circumventing the Stark Law's prohibition.

These prohibitions apply regardless of any intent by the parties to induce or reward referrals or the reasons for the financial relationship and the referral. In addition, knowing violations of the Stark Law may also serve as the basis for liability under the Federal False Claims Act, which can result in additional civil and criminal penalties.

Further, a violation of PORA is a misdemeanor and could result in civil penalties and criminal fines. Other states also have self-referral restrictions with which we have to comply, some of which differ from those imposed by the Stark Law or California law.

Federal and State Anti-Kickback Laws

The Federal Anti-kickback Statute makes it a felony for a person or entity, including a clinical laboratory, to knowingly and willfully offer, pay, solicit or receive any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, in order to induce business that is reimbursable under any federal health care program. A violation of the Anti-kickback Statute may result in imprisonment for up to ten years and fines of up to $100,000 for each violation and administrative civil money penalties of $100,000 plus up to three times the amount of the remuneration paid. Convictions under the Anti-kickback Statute result in mandatory exclusion from federal health care programs for a minimum of five years. In addition, The U.S. Department of Health and Human Services, or HHS, has the authority to impose civil assessments and fines and to exclude health care providers and others engaged in prohibited activities from Medicare, Medicaid and other federal health care programs. In addition, the government may assert that a claim that includes items or services resulting from a violation of the Anti-kickback Statute constitutes a false or fraudulent claim under the Federal False Claims Act, which is discussed in greater detail below. Additionally, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

Although the Anti-kickback Statute applies only to items and services reimbursable under any federal health care program, a number of states, including California, have passed statutes

substantially similar to the Anti-kickback Statute that apply to all third-party payers, including commercial insurers, and in some states, to patients without insurance. The California Attorney General and courts have interpreted the California anti-kickback and fee-splitting laws in substantially the same way as HHS and the courts have interpreted the Anti-kickback Statute. Penalties of such state laws include imprisonment and significant monetary fines.

Federal and state law enforcement authorities scrutinize arrangements between health care providers and potential referral sources to ensure that the arrangements are not designed as a mechanism to induce patient care referrals or induce the purchase or prescribing of particular products or services. Generally, courts have taken a broad interpretation of the scope of the Anti-kickback Statute, holding that the statute may be violated if merely one purpose of a payment arrangement is to induce referrals or purchases.

In addition to statutory exceptions to the Anti-kickback Statute, regulations provide for a number of safe harbors. If an arrangement meets the provisions of a safe harbor, it is deemed not to violate the Anti-kickback Statute. An arrangement must fully comply with each element of an applicable safe harbor in order to qualify for protection.

Failure to meet the requirements of the safe harbor, however, does not render an arrangement illegal. Rather, the government may evaluate such arrangements on a case-by-case basis, taking into account all facts and circumstances. There are no regulatory safe harbors under California laws.

Other Federal and State Health Care Laws

In addition to the requirements discussed above, several other health care fraud and abuse laws could have an effect on our business. For example, provisions of the Social Security Act permit Medicare and Medicaid to exclude an entity that charges the federal health care programs substantially in excess of its usual charges for its services. The terms “usual charge” and “substantially in excess” are subject to varying interpretations.

The Federal False Claims Act prohibits, among other things, a person from knowingly presenting, or causing to be presented, a false or fraudulent claim for payment or approval and from, making, using, or causing to be made or used, a false record or statement material to a false or fraudulent claim in order to secure payment or retaining an overpayment by the federal government. In addition to actions initiated by the government itself, the statute authorizes actions to be brought on behalf of the federal government by a private party having knowledge of the alleged fraud. Because the complaint is initially filed under seal, the action may be pending for some time before the defendant is even aware of the action. If the government intervenes and is ultimately successful in obtaining redress in the matter or if the plaintiff succeeds in obtaining redress without the government’s involvement, then the plaintiff will receive a percentage of the recovery. Finally, the Social Security Act includes its own provisions that prohibit the filing of false claims or submitting false statements in order to obtain payment. Violation of these provisions may result in fines, imprisonment or both, and possible exclusion from Medicare or Medicaid programs. Several states, including California, have enacted comparable false claims laws which may be broader in scope and may apply regardless of payer.

The civil monetary penalties statute imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. A person who offers or provides to a Medicare or Medicaid beneficiary any remuneration, including waivers of co-payments and deductible amounts (or any part thereof), that the person knows or should know is likely to influence the beneficiary’s selection of a particular provider, practitioner or supplier of Medicare or Medicaid payable items or services may be liable for civil monetary penalties of up to $20,000 for each wrongful act and up to three times the amount

improperly claimed. Moreover, in certain cases, providers who routinely waive copayments and deductibles for Medicare and Medicaid beneficiaries can also be held liable under the Anti-Kickback Statute and False Claims Act. One of the statutory exceptions to the prohibition is non-routine, unadvertised waivers of copayments or deductible amounts based on individualized determinations of financial need or exhaustion of reasonable collection efforts. The Office of Inspector General of HHS, or OIG, emphasizes, however, that this exception should only be used occasionally to address special financial needs of a particular patient. Although this prohibition applies only to federal healthcare program beneficiaries, applicable state laws related to, among other things, unlawful schemes to defraud, excessive fees for services, tortious interference with patient contracts and statutory or common law fraud, may also be implicated for similar practices offered to patients covered by commercial payers.

HIPAA created new federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payers, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Like the Anti-kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

The Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, collectively the Affordable Care Act, or ACA, among other things, also imposed annual reporting requirements on manufacturers of certain devices, drugs and biologics for certain payments and transfers of value by them and in some cases their distributors to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Any failure to comply with these reporting requirements could result in significant fines and penalties. Because we manufacture our own LDTs solely for use by or within our own laboratory, we believe that we are exempt from these reporting requirements. We cannot assure you, however, that the government will agree with our determination, and a determination that we have violated these laws and regulations, or a public announcement that we are being investigated for possible violations, could adversely affect our business, prospects, results of operations or financial condition.

If our operations are found to be in violation of any of the fraud and abuse laws described above or any other laws that apply to us, we may be subject to penalties, including potentially significant criminal and civil and/or administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government healthcare programs, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

International Regulations

Many countries in which we may offer any of our testing products in the future have anti-kickback regulations prohibiting providers from offering, paying, soliciting or receiving remuneration, directly or indirectly, in order to induce business that is reimbursable under any national health care program. In situations involving physicians employed by state-funded institutions or national health care agencies, violation of the local anti-kickback law may also constitute a violation of the U.S. Foreign Corrupt Practices Act, or FCPA, and/or other applicable anti-corruption laws.

The FCPA prohibits any U.S. individual, business entity or employee of a U.S. business entity from offering or providing, directly or through a third party, including any potential distributors we may rely on in certain markets, anything of value to a foreign official with corrupt intent to influence an award or

continuation of business or to gain an unfair advantage, whether or not such conduct violates local laws. In addition, it is illegal for a company that reports to the SEC to have false or inaccurate books or records or to fail to maintain a system of internal accounting controls. We will also be required to maintain accurate information and control over sales and distributors' activities that may fall within the purview of the FCPA, including its books and records provisions and its anti-bribery provisions.

The standard of intent and knowledge under the FCPA's anti-bribery provisions is minimal intent and knowledge are usually inferred from the fact that bribery took place. The FCPA's accounting provisions do not require intent. Violations of the FCPA's anti-bribery provisions for corporations and other business entities are subject to a fine of up to $2 million and officers, directors, stockholders, employees, and agents are subject to a fine of up to $100,000 and imprisonment for up to five years. Other countries, including the United Kingdom and other OECD Anti-Bribery Convention members, have similar anti-corruption regulations, such as the UK Bribery Act.

When marketing our testing products outside of the U.S., we may be subject to foreign regulatory requirements governing human clinical testing, prohibitions on the import of tissue necessary for us to perform our testing products or restrictions on the export of tissue imposed by countries outside of the U.S. or the import of tissue into the U.S., and marketing approval. These requirements vary by jurisdiction, differ from those in the U.S. and may in some cases require us to perform additional pre-clinical or clinical testing. In many countries outside of the U.S., coverage, pricing and reimbursement approvals are also required.

Privacy and Security Laws

Health Insurance Portability and Accountability Act; California Consumer Privacy Act of 2018, or the CCPA

Under the Federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH Act, HHS has issued regulations to protect the privacy and security of protected health information used or disclosed by certain entities including health care providers, such as us. HIPAA also regulates standardization of data content, codes and formats used in certain health care transactions and standardization of identifiers for health plans and providers. Penalties for violations of HIPAA and HITECH laws and regulations include civil and criminal penalties.

Three standards have been promulgated under HIPAA's and HITECH's regulations: the Standards for Privacy of Individually Identifiable Health Information, which restrict the use and disclosure of certain individually identifiable health information, the Standards for Electronic Transactions, which establish standards for common healthcare transactions, such as claims information, plan eligibility, payment information and the use of electronic signatures, and the Security Standards for the Protection of Electronic Protected Health Information, or Security Standards, which require covered entities and business associates to implement and maintain certain security measures to safeguard certain electronic health information, including the adoption of administrative, physical and technical safeguards to protect such information.

In 2009, Congress passed the American Recovery and Reinvestment Act of 2009, or ARRA, which included sweeping changes to HIPAA, including an expansion of HIPAA's privacy and security standards. ARRA includes the HITECH Act, which, among other things, made HIPAA's security standards directly applicable to business associates of covered entities effective February 17, 2010. A business associate is a person or entity that performs certain functions or activities on behalf of a covered entity that involve the use or disclosure of protected health information for or on behalf of the covered entity. As a result, business associates are now subject to significant civil and criminal penalties for failure to comply with applicable standards. Moreover, HITECH creates a new

requirement to report certain breaches of unsecured, individually identifiable health information and imposes penalties on entities that fail to do so. This requirement was modified and expanded by the final HIPAA Omnibus Rule of 2013. HITECH also increased the civil and criminal penalties that may be imposed against covered entities and business associates and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney fees and costs associated with pursuing federal civil actions.

HIPAA also governs patient access to laboratory test reports. Effective October 6, 2014, individuals (or their personal representatives, as applicable) have the right to access test reports directly from laboratories and to direct that copies of those reports be transmitted to persons or entities designated by the individual.

In addition to HIPAA and HITECH, there are state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws (e.g., Section 5 of the Federal Trade Commission Act and CCPA, that govern the collection, use, disclosure and protection of health-related and other personal information could apply to our operations or the operations of our collaborators. The state of California, for example, recently adopted the California Consumer Privacy Act of 2018, or the CCPA, which will come into effect beginning in January 2020. The CCPA has been characterized as the first “GDPR-like” privacy statute to be enacted in the United States because it mirrors a number of the key provisions of the European Union General Data Protection Regulation , or the GDPR, (discussed below). The CCPA establishes a new privacy framework for covered businesses by creating an expanded definition of personal information, establishing new data privacy rights for consumers in the State of California, imposing special rules on the collection of consumer data from minors, and creating a new and potentially severe statutory damages framework for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches. Penalties for violations of the CCPA will include civil penalties.

GDPR and Foreign Laws

We are also subject to foreign privacy laws in the foreign jurisdictions in which we sell our testing products. The interpretation, application and interplay of consumer and health-related data protection laws in the U.S., Europe and elsewhere are often uncertain, contradictory and in flux. For example, the European Union enacted Regulation (EU) 2016/679 (General Data Protection Regulation, or GDPR), has been enacted in the European Union and went into full effect in May 2018. These texts introduce many changes to privacy and security in the European Union, including stricter rules on consent and security duties for critical industries, including for the health sector. The interpretation of some rules is still unclear, and some requirements will be completed by national legislation. More generally, foreign laws and interpretations governing data privacy and security are constantly evolving and it is possible that laws may be interpreted and applied in a manner that is inconsistent with current practices, subjecting entities to government-imposed fines or orders. These fines can be very high. For instance, the GDPR introduces fines of up to EUR 20 million or 4% of a group’s worldwide annual turnover for certain infringements. In addition, privacy regulations differ widely from country to country.

Billing and Government Reimbursement for Clinical Laboratory Services

Medicare coverage is limited to items and services that are within the scope of a Medicare benefit category that are reasonable and necessary for the diagnosis or treatment of an illness or injury. With respect to Medicare coverage, Palmetto GBA, the Medicare Administrative Contractor, or MAC, responsible for administering Medicare’s molecular diagnostic services program, or MolDX Program, issued a local coverage determination, or LCD, that provides coverage for our AVISE® MTX test. The MAC responsible for administering Medicare claims submitted by our laboratory, Noridian Healthcare Solutions, has adopted Palmetto’s positive coverage policy, along with a related local coverage article that identifies a unique billing identifier for this test.

Under Medicare, payment for our laboratory tests are generally made under the Clinical Laboratory Fee Schedule, or CLFS, with payment amounts assigned to specific procedure billing codes. In April 2014, Congress passed the Protecting Access to Medicare Act, or PAMA, which included substantial changes to the way in which clinical laboratory services will be paid under Medicare. Under PAMA, laboratories that receive the majority of their Medicare revenue from payments made under the CLFS or the Physician Fee Schedule are required to report to CMS, beginning in 2017 and every three years thereafter (or annually for "advanced diagnostic laboratory tests"), private payer payment rates and volumes for their tests. Laboratories that fail to report the required payment information may be subject to substantial civil monetary penalties. As required under PAMA, CMS uses the rates and volumes reported by laboratories to develop Medicare payment rates for laboratory tests equal to the volume-weighted median of the private payer payment rates for the tests.

On June 23, 2016, CMS published the final rule implementing the reporting and rate-setting requirements under PAMA. For tests furnished on or after January 1, 2018, Medicare payments for clinical diagnostic laboratory tests are based upon these reported private payer rates. For clinical diagnostic laboratory tests that are assigned a new or substantially revised CPT code, initial payment rates will be assigned by the gap-fill methodology, as under prior law. Initial payment rates for new advanced diagnostic laboratory tests will be based on the actual list charge for the laboratory test. Any reductions to payment rates resulting from the new methodology are limited to 10% per test per year in each of the years 2018 through 2020 and to 15% per test per year in each of the years 2021 through 2023. PAMA's impact on Medicare reimbursement for AVISE® CTD in 2018 was -3.2% and is expected to be -10.1%, in 2019.

PAMA also authorizes the adoption of new, temporary billing codes and unique test identifiers for FDA-cleared or approved tests, as well as advanced diagnostic laboratory tests. The AMA's CPT Editorial Panel has approved a proposal to create a new section of billing codes to facilitate implementation of this section of PAMA. These proprietary laboratory analyses codes, or PLA codes, may be requested by a clinical laboratory or manufacturer to specifically identify their test. If approved, the codes are issued by the AMA on a quarterly basis. While our testing products are not presently identified by any PLA codes, we may seek a specific PLA code or codes to describe some of our testing products in the future.

Billing for diagnostic testing can be complicated. Depending on the billing arrangement and applicable law, we must bill various payers, such as insurance companies, Medicare, Medicaid, physicians, hospitals, employer groups and patients, all of which have different billing requirements. Additionally, compliance with applicable laws and regulations as well as internal compliance policies and procedures adds further complexity to the billing process. Changes in laws and regulations could negatively impact our ability to bill our clients or increase our costs. CMS also establishes new procedures and continuously evaluates and implements changes to the reimbursement process for billing government programs. Missing or incorrect information on test requisitions adds complexity to and slows the billing process, creates backlogs of unbilled tests, and generally increases the aging of accounts receivable and bad debt expense. Failure to timely or correctly bill may lead to our not being reimbursed for our services or an increase in the aging of our accounts receivable, which could adversely affect our results of operations and cash flows. Failure to comply with applicable laws relating to billing federal healthcare programs could also lead to various penalties, including:

- overpayments and recoupments of reimbursement received;
- exclusion from participation in Medicare/Medicaid programs;
- asset forfeitures;
- civil and criminal fines and penalties; and
- the loss of various licenses, certificates and authorizations necessary to operate our business.

Any of these penalties or sanctions could have a material adverse effect on our results of operations or cash flows.

Healthcare Reform

In March 2010, the ACA was enacted in the U.S. The ACA made a number of substantial changes to the way healthcare is financed by governmental and private insurers. For example, the ACA requires each medical device manufacturer to pay a sales tax equal to 2.3% of the price for which such manufacturer sells its medical devices. The medical device tax has been suspended until December 31, 2019, but is scheduled to return beginning in 2020. It is unclear at this time when, or if, the provision of our LDTs will trigger the medical device tax if the FDA ends its policy of general enforcement discretion and regulates certain LDTs as medical devices, and it is possible that this tax will apply to some or all of our existing testing products or testing products we may develop in the future. The ACA also contains a number of other provisions, including provisions governing enrollment in federal and state healthcare programs, reimbursement matters and fraud and abuse, which we expect will impact our industry and our operations in ways that we cannot currently predict. Additionally, on December 14, 2018, a U.S. District Court Judge in the Northern District of Texas, or Texas District Court Judge, ruled that the entire ACA is invalid based primarily on the fact that the Tax Cuts and Jobs Act of 2017 repealed the tax-based shared responsibility payment imposed by the ACA, on certain individuals who fail to maintain qualifying health coverage for all or part of a year, which is commonly referred to as the “individual mandate”. While the Texas District Court Judge, as well as the current presidential administration and CMS, have stated that this ruling will have no immediate effect, it is unclear how this decision, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA.

Additional state and federal health care reform measures may be adopted in the future, any of which could have a material adverse effect on the clinical laboratory industry.

Employees

As of December 31, 2018, we had 118 employees, all but one of whom were full time, 27 of whom work in laboratory operations, seven in research and development, 47 in sales and marketing and 37 in general and administrative functions. None of our employees is represented by a labor union or covered by a collective bargaining agreement. We consider our relationship with our employees to be good.

Suppliers

We rely on sole suppliers for the critical supply of reagents, equipment and other materials that we use to perform the tests that comprise our AVISE® testing products. We also purchase components used in our AVISE® testing product transportation kits from sole-source suppliers. Some of these items are unique to these suppliers and vendors.

Facilities

We lease approximately 14,000 square feet of office and laboratory space in Vista, California, under a lease that expires in 2021, with options to extend the lease for an additional 36-month period. We also lease an additional approximately 19,500 square feet of office space in Vista, California, under a lease that is co-terminus with our other lease expiring in 2021. We believe that our existing facilities and arrangements are adequate to meet our business needs for at least the next 12 months and that additional space will be available on commercially reasonable terms, if required.

Environmental Matters

Our operations require the use of hazardous materials (including biological and chemical materials) which subject us to a variety of federal, state and local environmental and safety laws and regulations.

We could be held liable for damages and fines as a result of our business operations. We cannot predict how changes in laws or regulations will affect our business, operations or the cost of compliance. We mitigate this risk by being in compliance with these laws and the CAP checklists. We have established Universal Precautions, as mandated by the Occupational Safety & Health Administration, to be practiced to prevent employee exposure to blood and other potentially infectious materials. Engineering and work practice controls are used to eliminate or minimize employee exposure. Personal protective equipment is used when occupational exposure may occur even though the engineering and work practice controls are in place. This Injury and Illness Prevention Program, or IIPP, is designed to furnish employees with a safe and healthy place of employment. This IIPP describes specific requirements for program responsibility, compliance, communication, hazard assessment, accident/exposure investigations, hazard correction, training and recordkeeping. In addition, appropriate biohazardous, chemical and sharps waste disposal are in place.

Legal Proceedings

We are not currently a party to any material legal proceedings, and we are not aware of any pending or threatened legal proceeding against us that we believe are likely to have a material adverse effect on our business, operating results or financial condition. From time to time, we may be involved in legal proceedings or subject to claims incident to the ordinary course of business. Regardless of the outcome, such proceedings or claims can have an adverse impact on us because of defense and settlement costs, diversion of resources and other factors, and there can be no assurances that favorable outcomes will be obtained.

MANAGEMENT

Executive Officers and Directors

The following table sets forth the name, age and position of each of our executive officers, key employees and directors as of December 31, 2018.

Name	Age	Position
Executive Officers		
Fortunato Ron Rocca	57	President, Chief Executive Officer and Director
Kamal Adawi	39	Chief Financial Officer and Corporate Secretary
Thierry Dervieux, Ph.D.	50	Chief Scientific Officer
Non-Employee Directors		
Brian Birk	59	Chairman of the Board of Directors
Dan Burrell	40	Director
Ebetuel Pallares, Ph.D.	45	Director
James L.L. Tullis	71	Director
Arthur Weinstein, M.D.	74	Director

(1) Member of the compensation committee

(2) Member of the audit committee

(3) Member of the nominating and corporate governance committee

Executive Officers

Fortunato Ron Rocca has served as our President and Chief Executive Officer and as a member of our board of directors since December 2011. From 2005 to October 2011, Mr. Rocca served as Vice President, Sales and Marketing, and as General Manager, at Prometheus, a specialty pharmaceutical and diagnostic company which was acquired by Nestlé SA in 2011, where he was responsible for leading the commercial organization, strategic planning and implementation of projects designed to maximize brand sales. Prior to joining Prometheus, Mr. Rocca served as the General Manager of Alpharma Inc., a specialty pharmaceutical company. Earlier in his career, Mr. Rocca served in senior sales and marketing management positions for Elan Pharmaceuticals, Inc., a neuroscience-focused biotechnology company and Janssen Pharmaceuticals, Inc., a pharmaceutical subsidiary of Johnson & Johnson. Mr. Rocca received a B.S. in Marketing and Personnel Management from Towson State University. Mr. Rocca's extensive knowledge of our business, as well as his over 25 years of experience in the diagnostic and pharmaceutical industries, contributed to our board of directors' conclusion that he should serve as a director of our company.

Kamal Adawi has served as our Chief Financial Officer since June 2017 and as our Corporate Secretary since September 2017. From 2014 to 2017, Mr. Adawi served as the Chief Financial Officer, Corporate Secretary and Treasurer at Pathway Genomics Corporation, or Pathway Genomics, a global genetic testing company. Prior to joining Pathway Genomics, from March 2014 to December 2014, Mr. Adawi served as our Director of Financial Planning and Analysis. Earlier in his career, Mr. Adawi managed the finance departments for GenMark Diagnostics, Inc., serving as its Manager of Financial Planning and Analysis, and Digirad Corporation, serving as its Manager of Financial Planning and Analysis, both publicly traded diagnostic companies. Mr. Adawi also served in various capacities in the finance and accounting departments at Becton, Dickinson and Company, a global medical technology company. Mr. Adawi received a B.A. in Finance from Michigan State University, an M.B.A. from Oakland University with a focus on management, and a M.S. in Finance from San Diego State University.

Thierry Dervieux, Ph.D. has served as our Chief Scientific Officer and Medical Laboratory Director since October 2010. Prior to joining Exagen, from 2008 to October 2010, Dr. Dervieux served as Vice

President of Research and Development with Cypress, a pharmaceutical company with a focus on drugs to treat central nervous system disorders, where he developed our current portfolio in the rheumatology space. Dr. Dervieux previously served as Senior Director Research and Development of Proprius Pharmaceuticals, Inc., a specialty pharmaceutical and personalized medicine company focused in rheumatology and pain management, until its acquisition by Cypress. Earlier in his career, Dr. Dervieux served as Principal Scientist and Director of Research and Development of Prometheus. Dr. Dervieux has nearly 20 years of experience with the development of drug monitoring and molecular diagnostic assays in partnership with academia and diagnostic industry. Dr. Dervieux is board certified by the American Board of Clinical Chemistry and holds certificates of qualification as medical laboratory director in the categories of cellular immunology, clinical chemistry, drug monitoring and diagnostic immunology. Dr. Dervieux holds Pharm.D. and Ph.D. degrees from Claude Bernard University in Lyon, France, an inter-university diploma in biostatistics from the University of Pierre et Marie Curie in Paris, France, and trained at St. Jude Children's Research Hospital in Memphis, Tennessee.

Non-Employee Directors

Brian Birk has served as a member of our board of directors since June 2008. In 2006, Mr. Birk co-founded Sun Mountain Capital, a boutique private equity firm focused on the southwest and Rocky Mountain regions which currently manages direct investment funds and funds of funds vehicles and where he serves as Managing Partner. Prior to forming Sun Mountain Capital, Mr. Birk served as a Vice President and Director of Private Equity at Fort Washington Capital Partners, a professional investment management services company. Mr. Birk also served as the Vice President of Technology Commercialization at Applied Minds, LLC, a technology consulting company, and the President of a division at BiosGroup Inc., a company which commercialized complex science software. Earlier in his career, Mr. Birk held a senior manager position at the Boston Consulting Group, Inc., a global management consulting firm, and finance manager positions at General Electric Company, an American multinational conglomerate, and GE Capital Corporation, its financial services unit. Mr. Birk is currently a member of the board of directors of several private companies, including Agilvax, Inc., Aspen Avionics, Inc., Avisa Pharma, Inc., Green Theme Technologies, Inc. and Respira Therapeutics, Inc. Mr. Birk received a B.A. in Economics from Carleton College and an M.B.A. from Northwestern University's Kellogg School of Management. Mr. Birk's experience as a venture capitalist and prior executive experience contributed to our board of directors' conclusion that he should serve as a director of our company.

Daniel C. Burrell has served as a member of our board of directors since October 2017. In 2014, Mr. Burrell served as a Founder, Executive Chairman and Chief Executive Officer of The Burrell College of Osteopathic Medicine. In 2008, Mr. Burrell formed Rosemont Realty, a commercial office company, where he served as Chairman and CEO until 2013. In 2004, Mr. Burrell founded Rosemont Capital, a private equity firm that successfully sponsored fund products in private equity and specialty fixed income, most notably in the asset back securities sector, and served as its Chief Executive Officer from 2008 until 2013. Mr. Burrell also founded and serves as the Chairman and Chief Executive Officer of The Burrell Group, a firm that manages and operates a group of privately held companies throughout the United States focused primarily on health care technology, wellness, life science investments, data center development and management, medical education and real estate, and as a Founder and Chairman of the New Mexico Leadership Institute and The Burrell Centers for Health Policy and Research located in Boise, Idaho and Las Cruces, New Mexico Mr. Burrell received a B.A. from Georgetown University, a J.D. from Yale University, and a General Course Degree from the London School of Economics. Mr. Burrell's extensive private equity experience and his experience serving as a director for numerous companies contributed to our board of directors' conclusion that he should serve as a director of our company.

Ebetuel Pallares, Ph.D. has served as a member of our board of directors since October 2012. In December 2014, Dr. Pallares founded Proficio Capital Management (PCM), LLC, a seed and early-stage venture fund headquartered in El Paso, TX, and he has served as its General Partner since that time. Through PCM, Dr. Pallares manages several investments, including PCM/Exagen L.P. In June 2009, he co-founded Cottonwood Capital Partners, the general partner of Cottonwood Technology Fund, a seed and early-stage venture fund with headquarters in El Paso, Texas, and he served as its Managing Partner until December 2014. In 2006, Dr. Pallares founded Joseph Advisory Services, LLC, a strategic consulting firm, and has served as its Manager since that time. He also currently manages investments on behalf of a family office, managing fund commitments and direct investments into private operating companies. His investment sectors span healthcare, medical diagnostics, therapeutics, IT, materials sciences and nanotechnology, education technology, AR/VR and financial technology companies. Dr. Pallares also serves on several corporate and non-profit boards, as an advisor to the UT Horizon Fund, the venture capital investment fund of the University of Texas system, as an Investor in Residence for New Mexico State University's Arrowhead Center and on the limited partnership advisory committee for several venture funds. He received a B.A. in economics from Brandeis University, an M.B.A. from The University of Texas at El Paso, or UTEP, and a Ph.D. in International Business from UTEP. Dr. Pallares's extensive venture capital experience and his service as a director for numerous companies contributed to our board of directors' conclusion that he should serve as a director of our company.

James L.L. Tullis has served as a member of our board of directors since May 2015. In 1986, Mr. Tullis founded Tullis Health Investors, a venture capital firm specializing in investments in the healthcare industry and has served as its Chief Executive Officer since its inception. Earlier in his career, Mr. Tullis was a Senior Vice President at E.F. Hutton & Co., a stock brokerage firm, and a principal at Morgan Stanley & Co., where he worked with the healthcare investment research and banking teams. Since 2006, Mr. Tullis has served as a member of the board of directors and since January 2017 as chair of the board of directors of Lord Abbett & Co. Mutual Funds, an investment management firm. Since 1998, he has served as a member of the board of directors of Crane Co., an industrial products manufacturing company, where he also serves as Chair of the Management Organization and Compensation Committee. Mr. Tullis also currently serves as a member of the board of directors of Alphatec Spine, Inc., a medical technology company, electroCore Inc., a bioelectronic medicine company, and a private company, SupplyPro, Inc., an inventory management solutions company. Mr. Tullis holds a B.A. from Stanford University and an M.B.A. from Harvard Business School. Mr. Tullis's extensive experience serving as a venture capitalist and board member for numerous companies in the health care industry contributed to our board of directors' conclusion that Mr. Tullis should serve as a director of our company.

Arthur Weinstein, M.D. has served as a member of our board of directors since December 2013 and as our Chief Medical Officer since October 2017. Dr. Weinstein has served as a Professor of Medicine at Georgetown University since 2002, and as the Chief of Rheumatology and Associate Chair of Medicine at the Washington Hospital Center since 2001. He has served as the co-chair of the board of directors for the Lupus Foundation of America's regional chapter for Washington, D.C., Maryland and Virginia since September 2013, and previously served as its vice chair from September 2012 to September 2013, and has served as a member of the board since 2002. He also served as the chair of that board's medical scientific advisory committee from 2005 to September 2012. Dr. Weinstein was a Fellow at the Royal College of Physicians (UK) in 2011 and was recognized as a Master by the American College of Rheumatology in 2009. Dr. Weinstein received an M.D. from the University of Toronto, and completed his residency and fellowship training in Internal Medicine and Rheumatology at the University of Toronto and University of London (UK). Dr. Weinstein's academic and professional work, specifically in the areas of rheumatology and lupus, contributed to our board of directors' conclusion that he should serve as a director of our company.

Board Composition and Election of Directors

Director Independence

Our board of directors currently consists of six members. Our board of directors has determined that are independent directors in accordance with the listing requirements of Nasdaq. The Nasdaq independence definition includes a series of objective tests, including that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his family members has engaged in various types of business dealings with us. In addition, as required by Nasdaq rules, our board of directors has made a subjective determination as to each independent director that no relationships exist, which, in the opinion of our board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, our board of directors reviewed and discussed information provided by the directors and us with regard to each director's business and personal activities and relationships as they may relate to us and our management. There are no family relationships among any of our directors or executive officers.

Classified Board of Directors

In accordance with the terms of our amended and restated certificate of incorporation that will go into effect immediately prior to the completion of this offering, our board of directors will be divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Effective upon the completion of this offering, our directors will be divided among the three classes as follows:

- the Class I directors will be and , and their terms will expire at our first annual meeting of stockholders following this offering;
- the Class II directors will be and , and their terms will expire at our second annual meeting of stockholders following this offering; and
- the Class III directors will be and , and their terms will expire at our third annual meeting of stockholders following this offering.

Our amended and restated certificate of incorporation that will go into effect immediately prior to the completion of this offering will provide that the authorized number of directors may be changed only by resolution of the board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control of our company. Our directors may be removed only for cause by the affirmative vote of the holders of at least two thirds of our outstanding voting stock then entitled to vote in the election of directors.

Board Leadership Structure

Our board of directors is currently led by its chairman, Brian Birk. Our board of directors recognizes that it is important to determine an optimal board leadership structure to ensure the independent oversight of management as we continue to grow. We separate the roles of chief executive officer and chairman of the board in recognition of the differences between the two roles. The chief executive officer is responsible for setting the strategic direction for our company and the day-to-day leadership and performance of our company, while the chairman of the board of directors provides guidance to the chief executive officer and presides over meetings of the full board of directors. We believe that this separation of responsibilities provides a balanced approach to managing the board of directors and overseeing our company.

Our board of directors has concluded that our current leadership structure is appropriate at this time. However, our board of directors will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

Role of Board in Risk Oversight Process

Our board of directors has responsibility for the oversight of our risk management processes and, either as a whole or through its committees, regularly discusses with management our major risk exposures, their potential impact on our business and the steps we take to manage them. The risk oversight process includes receiving regular reports from board committees and members of senior management to enable our board to understand our risk identification, risk management and risk mitigation strategies with respect to areas of potential material risk, including operations, finance, legal, regulatory, strategic and reputational risk.

The audit committee reviews information regarding liquidity and operations, and oversees our management of financial risks. Periodically, the audit committee reviews our policies with respect to risk assessment, risk management, loss prevention and regulatory compliance. Oversight by the audit committee includes direct communication with our external auditors, and discussions with management regarding significant risk exposures and the actions management has taken to limit, monitor or control such exposures. The compensation committee is responsible for assessing whether any of our compensation policies or programs has the potential to encourage excessive risk-taking. The nominating and corporate governance committee manages risks associated with the independence of the board, corporate disclosure practices, and potential conflicts of interest. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, the entire board is regularly informed through committee reports about such risks. Matters of significant strategic risk are considered by our board as a whole.

Board Committees and Independence

Our board of directors has established three standing committees—audit, compensation and nominating and corporate governance—each of which operates under a charter that has been approved by our board.

Audit Committee

The audit committee's main function is to oversee our accounting and financial reporting processes and the audits of our financial statements. This committee's responsibilities include, among other things:

- appointing our independent registered public accounting firm;
- evaluating the qualifications, independence and performance of our independent registered public accounting firm;
- approving the audit and non-audit services to be performed by our independent registered public accounting firm;
- reviewing the design, implementation, adequacy and effectiveness of our internal accounting controls and our critical accounting policies;
- discussing with management and the independent registered public accounting firm the results of our annual audit and the review of our quarterly unaudited financial statements;
- reviewing, overseeing and monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to financial statements or accounting matters;
- reviewing on a periodic basis, or as appropriate, any investment policy and recommending to our board any changes to such investment policy;

- reviewing with management and our auditors any earnings announcements and other public announcements regarding our results of operations;
- preparing the report that the SEC requires in our annual proxy statement;
- reviewing and approving any related party transactions and reviewing and monitoring compliance with our code of conduct and ethics; and
- reviewing and evaluating, at least annually, the performance of the audit committee and its members including compliance of the audit committee with its charter.

The members of our audit committee are , and . serves as the chairperson of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and Nasdaq. Our board of directors has determined that is an "audit committee financial expert" as defined by applicable SEC rules and has the requisite financial sophistication as defined under the applicable Nasdaq rules and regulations. Our board of directors has determined each of , and are independent under the applicable rules of the SEC and Nasdaq. Under the applicable Nasdaq rules, we are permitted to phase in our compliance with the independent audit committee requirements of Nasdaq on the same schedule as we are permitted to phase in our compliance with the independent audit committee requirements pursuant to Rule 10A-3 under the Exchange Act, which require: (i) one independent member at the time of listing, (ii) a majority of independent members within 90 days of listing and (iii) all independent members within one year of listing. We will comply with the phase-in requirements of the Nasdaq rules, and within one year of our listing on Nasdaq, all members of our audit committee will be independent under Nasdaq rules and Rule 10A-3. Upon the listing of our common stock on Nasdaq, the audit committee will operate under a written charter that satisfies the applicable standards of the SEC and Nasdaq.

Compensation Committee

Our compensation committee approves policies relating to compensation and benefits of our officers and employees. The compensation committee approves corporate goals and objectives relevant to the compensation of our chief executive officer and other executive officers, evaluates the performance of these officers in light of those goals and objectives and approves the compensation of these officers based on such evaluations. The compensation committee also approves the issuance of stock options and other awards under our equity plan. The compensation committee will review and evaluate, at least annually, the performance of the compensation committee and its members, including compliance by the compensation committee with its charter.

The members of our compensation committee are , and . serves as the chairperson of the committee. Our Board has determined that each member of this committee is independent under the applicable rules and regulations of Nasdaq and is a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act. Upon the listing of our common stock on Nasdaq, the compensation committee will operate under a written charter, which the compensation committee will review and evaluate at least annually.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee is responsible for assisting our board of directors in discharging the board's responsibilities regarding the identification of qualified candidates to become board members, the selection of nominees for election as directors at our annual meetings of stockholders (or special meetings of stockholders at which directors are to be elected), and the selection of candidates to fill any vacancies on our board of directors and any committees thereof. In addition, the nominating and corporate governance committee is responsible for overseeing our corporate governance policies, reporting and making recommendations to our board of directors concerning governance matters and oversight of the evaluation of our board of directors. The members

of our nominating and corporate governance committee are , and .. serves as the chairman of the committee. Our board has determined that each member of this committee is independent under the applicable rules and regulations of Nasdaq relating to nominating and corporate governance committee independence. Upon the listing of our common stock on Nasdaq, the nominating and corporate governance committee will operate under a written charter, which the nominating and corporate governance committee will review and evaluate at least annually.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has ever been one of our officers or employees. None of our executive officers currently serves, or has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Board Diversity

Upon the completion of this offering, our nominating and corporate governance committee will be responsible for reviewing with the board of directors, on an annual basis, the appropriate characteristics, skills and experience required for the board of directors as a whole and its individual members. In evaluating the suitability of individual candidates (both new candidates and current members) for election or appointment, the nominating and corporate governance committee, in recommending candidates for election, and the board of directors will take into account many factors, including the following:

- personal and professional integrity, ethics and values;
- experience in corporate management, such as serving as an officer or former officer of a publicly-held company;
- experience as a board member or executive officer of another publicly-held company;
- strong finance experience;
- diversity of expertise and experience in substantive matters pertaining to our business relative to other board members;
- diversity of background and perspective, including, but not limited to, with respect to age, gender, race, place of residence and specialized experience;
- experience relevant to our business industry and with relevant social policy concerns; and
- relevant academic expertise or other proficiency in an area of our business operations.

Currently, our board of directors evaluates, and following the completion of this offering will evaluate, each individual in the context of the board of directors as a whole, with the objective of assembling a group that can best maximize the success of the business and represent stockholder interests through the exercise of sound judgment using its diversity of experience in these various areas.

Code of Business Conduct and Ethics

We plan to adopt a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, which will be effective upon the completion of this offering. Upon the completion of this offering, our code of business conduct and ethics will be available under the Corporate Governance section of our website at www.exagen.com. In addition, we intend to post on our website all disclosures that are required by law or the listing standards of Nasdaq concerning any amendments to, or waivers from, any provision of the code. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this prospectus.

EXECUTIVE AND DIRECTOR COMPENSATION

Executive Compensation

This section discusses the material components of the executive compensation program for our executive officers who are named in the "2018 Summary Compensation Table" below. In 2018, our chief executive officer and our two other highest-paid executive officers, or our named executive officers, were as follows:

- Fortunato Ron Rocca, President and Chief Executive Officer;
- Kamal Adawi, Chief Financial Officer and Corporate Secretary; and
- Thierry Dervieux, Ph.D., Chief Scientific Officer.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt following the completion of this offering may differ materially from the currently planned programs summarized in this discussion.

2018 Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers during the fiscal year ended December 31, 2018:

Name and Principal Position:	Year	Salary($)	Bonus ($)[1]	Option Awards($)[2]	All Other Compensation ($)[3]	Total($)
Fortunato Ron Rocca *President and Chief Executive Officer*	2018	348,113	–	53,499	8,250	409,862
Kamal Adawi *Chief Financial Officer and Corporate Secretary*	2018	271,039	–	13,910	8,250	293,199
Thierry Dervieux, Ph.D. *Chief Scientific Officer*	2018	278,391	–	16,050	8,250	302,691

(1) The 2018 bonuses have not been determined. It is anticipated that bonuses will be determined in the first quarter of 2019. For additional information, see "—2018 Bonuses", below.

(2) With respect to Mr. Adawi, amounts reflect the aggregate grant date fair value of stock options granted in 2018 and with respect to Mr. Rocca and Dr. Dervieux, amounts reflect the incremental fair value of stock options granted pursuant to our one-time stock option exchange in October 2018, as explained further below, each as computed in accordance with ASC Topic 718, *Compensation-Stock Compensation*. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options. The assumptions that we used to calculate these amounts are discussed in Note 12 to our audited financial statements appearing elsewhere in this prospectus.

(3) Represents employer matching contributions under our 401(k) plan on behalf of each named executive officer.

Narrative Disclosure to Summary Compensation Table

2018 Salaries

The named executive officers receive a base salary to compensate them for services rendered to our company. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities.

The 2018 base salaries for Messrs. Rocca and Adawi and Dr. Dervieux were $348,113, $271,039, and $278,391, respectively.

2018 Bonuses

Our named executive officers were eligible to earn cash bonuses based on Company and individual performance during the year ended December 31, 2018, as determined by our board of directors in its sole discretion. The board of directors has not yet made a determination with respect to the bonus payments for the year ended December 31, 2018, but anticipates that such determination will be made in the first quarter of 2019.

Equity Compensation

We typically grant equity awards to key new hires upon their commencing employment with us. We historically have used stock options as the primary incentive for long-term compensation to our named executive officers because they are able to profit from stock options only if our stock price increases relative to the stock option's exercise price, which generally is set at the fair market value of our common stock as of the applicable grant date. Generally, the stock options we grant vest as to 25% of the total number of option shares on the first anniversary of the date of grant and in equal monthly installments over the ensuing 36 months, subject to the employee's continued service with us on the vesting date.

In 2018 we awarded a stock option to Mr. Adawi covering 15,455,186 shares. Mr. Adawi's stock option vests in accordance with our typical vesting schedule described above. In addition, the stock option will become exercisable subject to Mr. Adawi's continuous service with respect to (i) 75% of the underlying shares upon the later to occur of (A) the applicable vesting date and (B) the closing of an initial public offering, and (ii) the remaining 25% of the underlying shares upon the later to occur of (A) the applicable vesting date and (B) the one-year anniversary of an initial public offering.

2018 Stock Option Exchange

In October 2018 we approved a one-time stock option exchange whereby certain underwater stock options, including those held by our named executive officers, were exchanged for replacement stock options to purchase shares of common stock having a lower exercise price.

Each replacement stock option was granted with an exercise price of $0.0014 per share, which our board of directors determined was the fair market value of our common stock on the grant date of the replacement option. In addition, each replacement option vests with respect to 25% of the shares underlying the option on the first anniversary of the grant date and with respect to the remaining shares, on each monthly anniversary thereafter, subject to the option holder's continued service. Further, Mr. Rocca's replacement option will also vest in full upon a termination of service due to a termination by us without cause or for good reason, or due to Mr. Rocca's death or disability, in each case, on or within 12 months following an initial public offering. For purposes of Mr. Rocca's replacement option, "cause" means: (i) a conviction for, or guilty plea to, a felony involving moral turpitude; (ii) an uncured willful refusal to comply with our lawful and reasonable instructions, or to otherwise perform duties as we lawfully and reasonably determine; (iii) any willful act of dishonesty intended to result in material gain or personal enrichment at the expense of us or any of our customers, partners, affiliates or employees; or (iv) any uncured willful act of gross misconduct that is injurious to us. "Good reason" means, without consent, and in the absence of cause, (i) any material reduction of base compensation; or (ii) any material reduction in title, authority or duties.

The following table shows the number of options exchanged for and received by our named executive officers as part of this option exchange. Mr. Adawi did not participate in the stock option exchange.

Named Executive Officer	Stock Options Exchanged	Stock Options Received
Fortunato Ron Rocca	6,379,362	59,443,024
Thierry Dervieux, Ph.D.	1,282,447	17,832,907

The replacement options held by our named executive officers will become exercisable subject to the executive's continuous service with respect to (i) 75% of the underlying shares upon the later to occur of (A) the applicable vesting date and (B) the closing of an initial public offering, and (ii) the remaining 25% of the underlying shares upon the later to occur of (A) the applicable vesting date and (B) the one-year anniversary of an initial public offering.

Other than the stock option granted to Mr. Adawi and the awards granted as part of our one-time option exchange, none of our named executive officers received a stock option, or other equity award, in 2018.

Stock options granted to our named executive officers may be subject to accelerated vesting in certain circumstances. For additional discussion, please see "—Offer Letter with Thierry Dervieux, Ph.D." and "—Other Elements of Compensation—Severance and Change in Control Benefits" below.

Equity Compensation Plans

2013 Stock Option Plan

We currently maintain the 2013 Stock Option Plan, as amended from time to time, or the 2013 Plan, in order to provide additional incentives for our employees, directors and consultants, and to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to our success. We offer stock options to our employees, including our named executive officers, as the long-term incentive component of our compensation program.

For additional information about the 2013 Plan, please see the section titled "2013 Stock Option Plan" below. As mentioned below, in connection with the completion of this offering, no further awards will be granted under the 2013 Plan.

2002 Stock Option Plan

We also currently have awards outstanding under our 2002 Stock Option Plan, or the 2002 Plan. Generally, the stock options granted under the 2002 Plan vested as to 25% of the total number of option shares on the first anniversary of the date of grant and in equal monthly installments over the ensuing 36 months, subject to the employee's continued service with us on the vesting date. The 2002 Plan expired in accordance with its terms in December 2012 and no additional awards have been granted under the 2002 Plan since its expiration. For additional information about the 2002 Plan, please see the section titled "2002 Stock Option Plan" below.

2019 Incentive Award Plan

In connection with this offering, we intend to adopt a 2019 Incentive Award Plan, referred to in this prospectus as the 2019 Plan, in order to facilitate the grant of cash and equity incentives to directors, employees (including our named executive officers) and consultants of our company and certain of our affiliates and to enable our company and certain of our affiliates to obtain and retain services of these individuals, which is essential to our long-term success. We expect that the 2019 Plan will be effective on the date on which it is adopted by our board of directors, subject to approval of the plan by our stockholders. Upon the effectiveness of the 2019 Plan, no further grants will be made under the 2013 Plan. For additional information about the 2019 Plan, please see the section titled "2019 Incentive Award Plan" below.

Other Elements of Compensation

Retirement Plans

We currently maintain a 401(k) retirement savings plan that allows eligible employees to defer a portion of their compensation, within limits prescribed by the Code, on a pre-tax basis through

contributions to the plan. Our named executive officers are eligible to participate in the 401(k) plan on the same terms as other full-time employees generally. Currently, we make employer matching contributions under the 401(k) plan up to a specified percentage, and these matching contributions are fully vested as of the date on which the contribution is made. We believe that providing a vehicle for tax-deferred retirement savings though our 401(k) plan, and making matching contributions, adds to the overall desirability of our executive compensation package and further incentivizes our employees, including our named executive officers, in accordance with our compensation policies.

Employee Benefits and Perquisites

Our named executive officers are eligible to participate in our health and welfare plans to the same extent as all full-time employees generally, including:

- medical, dental and vision benefits;
- medical and dependent care flexible spending accounts;
- short-term and long-term disability insurance; and
- life insurance and accidental death and dismemberment insurance.

We do not provide our named executive officers with any other perquisites or other personal benefits.

No Tax Gross-Ups

We generally have not made gross-up payments to cover our named executive officers' personal income taxes that may pertain to any of the compensation paid or provided by our company.

Severance and Change in Control Benefits

Dr. Dervieux may become entitled to certain benefits or enhanced benefits upon a qualifying termination of employment pursuant to his offer letter, as explained in further detail below. In addition, stock options granted to our employees, including our named executive officers, may be subject to acceleration in connection with a change in control under our equity plans, and for Mr. Rocca, subject to acceleration upon a qualifying termination in connection with an initial public offering. For additional discussion, please see "—Equity Compensation" above and "—Offer Letter with Thierry Dervieux, Ph.D." and "—Equity Incentive Award Plans" below. Other than the benefits described above, none of our named executive officers are entitled to any severance or change in control benefits.

Offer Letter with Thierry Dervieux, Ph.D.

In October 2010, we entered into an offer letter with Dr. Dervieux, which was amended in September 2011.

Dr. Dervieux's offer letter provides for at-will employment, an annual base salary and eligibility to participate in our management bonus plan, with the goals and payments under the management bonus plan to be defined and approved by our board of directors. Pursuant to the offer letter, Dr. Dervieux received options to purchase 100,000 shares of our common stock in connection with the commencement of his employment. Such options were exchanged for replacement stock options to purchase shares of common stock having a lower exercise price as part of our one-time stock option exchange in October 2018.

Pursuant to Dr. Dervieux's offer letter, if we terminate Dr. Dervieux's employment without cause or Dr. Dervieux resigns for good reason, Dr. Dervieux will be entitled to the following payments and benefits: (i) his fully earned but unpaid base salary through the date of termination at the rate then in effect, plus all other amounts under any compensation plan or practice to which he is entitled, and (ii) a

lump sum cash payment in an amount equal to his annual base salary as in effect immediately prior to the date of termination. Under Dr. Dervieux's offer letter, "good reason" means, without consent, (A) a material reduction in duties or responsibilities; (B) the relocation of the company's principal business location to a point more than 250 miles east of its Albuquerque location or more than 1,000 miles from Dr. Dervieux's principal residence; and (C) a material reduction of base salary as a result of a company-wide compensation reduction or in connection with similar decreases for the management team.

Outstanding Equity Awards at 2018 Fiscal Year-End

The following table presents the outstanding equity incentive plan awards held by each named executive officer as of December 31, 2018. Unless otherwise indicated, each option listed in the following table was granted under the 2013 Plan.

		Option Awards			
Name:	Grant Date	Number of Securities Underlying Unexercised Options (#) Exercisable[1]	Number of Securities Underlying Unexercised Options (#) Unexercisable[1]	Option Price($)	Option Expiration Date
Fortunato Ron Rocca	10/5/2018	–	59,443,024[2][3]	0.0014	10/5/2028
Kamal Adawi	10/5/2018	–	15,455,186[2]	0.0014	10/5/2028
Thierry Dervieux, Ph.D	10/5/2018	–	17,832,907[2]	0.0014	10/5/2028

(1) The option vests with respect to 25% of the shares underlying the option on the first anniversary of the grant date and with respect to the remaining shares, on each monthly anniversary over the three-year period thereafter, subject to the grantee's continued service.

(2) The option will become exercisable subject to the grantee's continuous service with respect to (i) 75% of the underlying shares upon the later to occur of (A) the applicable vesting date and (B) the closing of an initial public offering, and (ii) the remaining 25% of the underlying shares upon the later to occur of (A) the applicable vesting date and (B) the one-year anniversary of an initial public offering.

(3) Mr. Rocca's option will also vest in full upon a termination of service due to a termination by us without cause or by Mr. Rocca for good reason, or due to Mr. Rocca's death or disability, in each case, on or within 12 months following an initial public offering.

Director Compensation

2018 Director Compensation Table

The following table sets forth information for the year ended December 31, 2018 regarding the compensation awarded to, earned by or paid to our non-employee directors who served on our board of directors during 2018. Mr. Rocca, who served as our President and Chief Executive Officer during the year ended December 31, 2018, and continues to serve in that capacity, does not receive additional compensation for his service as a director, and therefore is not included in the Director Compensation table below. All compensation paid to Mr. Rocca is reported above in the "2018 Summary Compensation Table".

Name:	Fees Earned or Paid in Cash ($)	Option Awards ($)[1]	All Other Compensation ($)	Total ($)
Brian Birk	–	3,759	–	3,759
Dan Burrell	–	2,506	–	2,506
Ebetuel Pallares, Ph.D.	–	2,506	–	2,506
James L.L. Tullis	–	2,506	–	2,506
Arthur Weinstein, M.D.	–	2,506	126,769[2]	129,275

(1) Amounts reflect the aggregate grant date fair value of stock options granted in 2018, computed in accordance with the provisions of ASC Topic 718, Compensation-Stock Compensation. These amounts do not reflect the actual economic value

that will be realized by the director upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options. The assumptions that we used to calculate these amounts are discussed in Note 12 to our audited financial statements elsewhere in this prospectus. As of December 31, 2018, the following outstanding option awards were held by members of our Board: Mr. Birk, 3,566,581 shares, Mr. Burrell, 2,377,720 shares, Dr. Pallares, 2,377,720 shares, Mr. Tullis, 2,377,720 shares and Dr. Weinstein, 2,602,720 shares.

(2) Amount paid to Dr. Weinstein reflects payments for his services as a consultant.

In November 2013, we entered into a director and consulting services agreement with Dr. Weinstein, pursuant to which he receives $18,000 per year, payable monthly, for his service as a member of our board of directors. In addition, in September 2017, we entered into a consulting services agreement with Dr. Weinstein, as amended in May 2018, that supplanted the prior director and consulting services agreement and pursuant to which he receives a bi-weekly fee for his services as our Chief Medical Officer for 20 hours per week. In 2018 this bi-weekly fee was $4,615.39 and was increased effective June 4, 2018 to $5,000. Dr. Weinstein's consulting services agreement provides for a stock option grant upon approval by our board of directors, as well as hotel reimbursement and a Company-provided cell phone. The consulting services agreement with Dr. Weinstein will be terminated effective upon consummation of this offering and will be superseded by our new non-employee director compensation program, as described below.

Post-IPO Director Compensation Program

In connection with this offering, we intend to implement a compensation program for our nonemployee directors that we expect will consist of a combination of cash annual retainer fees and long-term equity-based compensation. Our board of directors is still in the process of developing, approving and implementing this program.

Equity Incentive Award Plans

The following summarizes the material terms of the 2002 Plan and 2013 Plan, under which we have previously made periodic grants of equity and equity-based awards to our named executive officers and other key employees, and the 2019 Plan.

2002 Stock Option Plan

On January 29, 2002, our board of directors and our stockholders approved the 2002 Plan.

The 2002 Plan expired in accordance with its terms in December 2012 and no additional awards have been granted under the 2002 Plan since its expiration. As of December 31, 2018, 862,446 shares of our common stock were subject to outstanding option awards under the 2002 Plan.

Administration. The board of directors administers the 2002 Plan. Subject to the terms and conditions of the 2002 Plan, the administrator has the authority to select the persons to whom awards are to be made, to determine the type or types of awards to be granted to each person, determine the number of awards to grant, determine the number of shares to be subject to such awards, and the terms and conditions of such awards, and make all other determinations and decisions and to take all other actions necessary or advisable for the administration of the 2002 Plan. The plan administrator is also authorized to establish, adopt, amend or revise rules relating to administration of the 2002 Plan, subject to certain restrictions.

Eligibility. Options were able to be granted to individuals who are then our employees, consultants and members of our board of directors. Only employees may be granted ISOs.

Awards. The 2002 Plan permitted the award of stock options. Only stock options were granted under the 2002 Plan. Each award is set forth in a separate agreement with the person receiving the award and indicates the type, terms and conditions of the award.

Corporate Transactions. In the event of a corporate transaction where the acquirer does not assume awards granted under the 2002 Plan, awards issued under the 2002 Plan will terminate as of a date to be fixed by our board of directors.

2013 Plan

Our board of directors and certain of our stockholders approved the 2013 Plan, which became effective in December 2012.

The 2013 Plan was amended in October 2018 to increase the share reserve to 123,000,000. As of December 31, 2018, 120,560,601 shares of our common stock were subject to outstanding option awards and 1,576,953 shares of our common stock remained available for future issuance. The 2013 Plan will expire in December 2022 unless earlier terminated by our board of directors. Following the effectiveness of the 2019 Plan, the 2013 Plan will terminate and we will not make any further awards under the 2013 Plan. However, any outstanding awards granted under the 2013 Plan will remain outstanding, subject to the terms of the 2013 Plan and applicable award agreement.

Administration. The board of directors administers the 2013 Plan. Subject to the terms and conditions of the 2013 Plan, the administrator has the authority to select the persons to whom option awards are to be made, determine the number of option awards to grant, determine the number of shares to be subject to such option awards, and the terms, the exercise price of such option awards, subject to the limits established in the 2013 Plan, conditions and restrictions of such awards, and make all other determinations and decisions and to take all other actions necessary or advisable for the administration of the 2013 Plan. The plan administrator is also authorized to establish, adopt, amend or revise rules relating to administration of the 2013 Plan, subject to certain restrictions.

Eligibility. Options may be granted to individuals who are then our employees, consultants and members of our board of directors. Only employees (including directors who are also employees) may be granted ISOs.

Awards. The 2013 Plan permits the award of stock options. Only stock options have been granted under the 2013 Plan to date. Each award is set forth in a separate agreement with the person receiving the award and indicates the type, terms and conditions of the award.

- Nonqualified stock options. NSOs provide for the right to purchase shares of our common stock at a specified price which may not be less than the fair market value of a share of stock on the date of grant, and usually will become exercisable (at the discretion of our board of directors) in one or more installments after the grant date, subject to the participant's continued employment or service with us and/or subject to the satisfaction of performance targets established by our compensation committee (or the board of directors, in the case of awards to non-employee directors). NSOs may be granted for any term specified by our compensation committee (or the board of directors, in the case of awards to non-employee directors), but the term may not exceed ten years.
- Incentive Stock Options. ISOs are designed to comply with the provisions of the Code and are subject to specified restrictions contained in the Code applicable to ISOs. Among such restrictions, ISOs must have an exercise price of not less than the fair market value of a share of common stock on the date of grant, may only be granted to employees, must expire within a specified period of time following the optionee's termination of employment, and must be exercised within the ten years after the date of grant. In the case of an ISO granted to an individual who owns (or is deemed to own) more than 10% of the total combined voting power of all classes of our capital stock on the date of grant, the 2013 Plan provides that the exercise price must be at least 110% of the fair market value of a share of common stock on the date of grant and the ISO must expire on the fifth anniversary of the date of its grant.

Corporate Transactions. In the event of a corporate transaction, all outstanding stock options will become fully vested and exercisable for the 30-day period immediately preceding the closing of such transaction (provided that the exercise of any stock option that would have been unvested but for the consummation of the change in control is contingent upon and will be subject to the closing of the transaction). In addition, in the event of a corporate transaction, the board of directors may provide for the termination of all outstanding stock options in exchange for a cash payment in an amount equal to the fair market value of the shares of our common stock subject to the stock option immediately prior to the consummation of such transaction less the exercise price of such option. Any options that are outstanding as of the consummation of a corporate transaction will expire automatically unless the acquirer assumes such awards or are otherwise continued in effect pursuant to the terms of the transaction.

Amendment or Termination of the 2013 Plan. Our board of directors may terminate, amend or modify the 2013 Plan, provided that any termination of the plan must be upon 30 days' written notice to participants. However, stockholder approval of any amendment to the 2013 Plan must be obtained to reduce the option price per share after the option has been granted or the extent necessary and desirable to comply with any applicable law, regulation or stock exchange rule. As described above, the 2013 Plan will terminate as of the effective date of the 2019 Plan.

2019 Incentive Award Plan

We intend to adopt the 2019 Incentive Award Plan, or the 2019 Plan, subject to approval by our stockholders, under which we may grant cash and equity incentive awards to eligible service providers in order to attract, motivate and retain the talent for which we compete. The material terms of the 2019 Plan, as it is currently contemplated, are summarized below. Our board of directors is still in the process of developing, approving and implementing the 2019 Plan and, accordingly, this summary is subject to change.

Eligibility and Administration. Our employees, consultants and directors, and employees, consultants and directors of our subsidiaries will be eligible to receive awards under the 2019 Plan. Following our initial public offering, the 2019 Plan will be administered by our board of directors with respect to awards to non-employee directors and by our compensation committee with respect to other participants, each of which may delegate its duties and responsibilities to committees of our directors and/or officers (referred to collectively as the plan administrator below), subject to certain limitations that may be imposed under the 2019 Plan, Section 16 of the Exchange Act, and/or stock exchange rules, as applicable. The plan administrator will have the authority to make all determinations and interpretations under, prescribe all forms for use with, and adopt rules for the administration of, the 2019 Plan, subject to its express terms and conditions. The plan administrator will also set the terms and conditions of all awards under the 2019 Plan, including any vesting and vesting acceleration conditions.

Limitation on Awards and Shares Available. An aggregate of shares of our common stock will be available for issuance under awards granted pursuant to the 2019 Plan, which shares may be authorized but unissued shares, or shares purchased in the open market. The number of shares available for issuance will be increased by (i) the number of shares represented by awards outstanding under our 2013 Plan that are forfeited, lapse, unexercised or are settled in cash following the effective date of the 2019 Plan and (ii) an annual increase on the first day of each calendar year beginning January 1, 2020 and ending on and including January 1, 2029, equal to the least of (A) shares, (B) % of the aggregate number of shares of common stock outstanding (on an as converted basis) on the final day of the immediately preceding calendar year and (C) such smaller number of shares as is determined by our board of directors.

If an award under the 2019 Plan is forfeited, expires or is settled for cash, any shares subject to such award may, to the extent of such forfeiture, expiration or cash settlement, be used again for new

grants under the 2019 Plan. However, the following shares may not be used again for grant under the 2019 Plan: (i) shares tendered or withheld to satisfy grant or exercise price or tax withholding obligations associated with an award; (ii) shares subject to a stock appreciation right, or SAR, that are not issued in connection with the stock settlement of the stock appreciation right on its exercise; and (iii) shares purchased on the open market with the cash proceeds from the exercise of options.

Awards granted under the 2019 Plan upon the assumption of, or in substitution for, awards authorized or outstanding under a qualifying equity plan maintained by an entity with which we enter into a merger or similar corporate transaction will not reduce the shares available for grant under the 2019 Plan.

The 2019 Plan provides that the sum of any cash compensation and the aggregate grant date fair value (determined as of the date of the grant under ASC Topic 718, or any successor thereto) of all awards granted to a non-employee director as compensation for services as a non-employee director during any calendar year shall not exceed the amount equal to $.

Awards. The 2019 Plan provides for the grant of stock options, including incentive stock options, or ISOs, and nonqualified stock options, or NSOs, restricted stock, dividend equivalents, stock payments, restricted stock units, or RSUs, performance shares, other incentive awards, stock appreciation rights, or SARs, and cash awards. No determination has been made as to the types or amounts of awards that will be granted to specific individuals pursuant to the 2019 Plan. Certain awards under the 2019 Plan may constitute or provide for a deferral of compensation, subject to Section 409A of the Code, which may impose additional requirements on the terms and conditions of such awards. All awards under the 2019 Plan will be set forth in award agreements, which will detail all terms and conditions of the awards, including any applicable vesting and payment terms and post-termination exercise limitations. Awards other than cash awards generally will be settled in shares of our common stock, but the plan administrator may provide for cash settlement of any award. A brief description of each award type follows.

- *Stock Options*. Stock options provide for the purchase of shares of our common stock in the future at an exercise price set on the grant date. ISOs, by contrast to NSOs, may provide tax deferral beyond exercise and favorable capital gains tax treatment to their holders if certain holding period and other requirements of the Code are satisfied. The exercise price of a stock option may not be less than 100% of the fair market value of the underlying share on the date of grant (or 110% in the case of ISOs granted to certain significant stockholders), except with respect to certain substitute options granted in connection with a corporate transaction. The term of a stock option may not be longer than ten years (or five years in the case of ISOs granted to certain significant stockholders). Vesting conditions determined by the plan administrator may apply to stock options and may include continued service, performance and/or other conditions.
- *SARs*. SARs entitle their holder, upon exercise, to receive from us an amount equal to the appreciation of the shares subject to the award between the grant date and the exercise date. The exercise price of a SAR may not be less than 100% of the fair market value of the underlying share on the date of grant (except with respect to certain substitute SARs granted in connection with a corporate transaction) and the term of a SAR may not be longer than ten years. Vesting conditions determined by the plan administrator may apply to SARs and may include continued service, performance and/or other conditions.
- *Restricted Stock and RSUs*. Restricted stock is an award of nontransferable shares of our common stock that remain forfeitable unless and until specified conditions are met, and which may be subject to a purchase price. RSUs are contractual promises to deliver shares of our common stock in the future, which may also remain forfeitable unless and until specified

conditions are met, and may be accompanied by the right to receive the equivalent value of dividends paid on shares of our common stock prior to the delivery of the underlying shares. Delivery of the shares underlying RSUs may be deferred under the terms of the award or at the election of the participant, if the plan administrator permits such a deferral. Conditions applicable to restricted stock and RSUs may be based on continuing service, the attainment of performance goals and/or such other conditions as the plan administrator may determine.

- *Other Stock or Cash Based Awards*. Other stock or cash based awards are awards of cash, fully vested shares of our common stock and other awards valued wholly or partially by referring to, or otherwise based on, shares of our common stock. Other stock or cash based awards may be granted to participants and may also be available as a payment form in the settlement of other awards, as standalone payments and as payment in lieu of base salary, bonus, fees or other cash compensation otherwise payable to any individual who is eligible to receive awards.
- *Dividend Equivalents*. Dividend equivalents represent the right to receive the equivalent value of dividends paid on shares of our common stock and may be granted alone or in tandem with awards other than stock options or SARs. Dividend equivalents are credited as of dividend record dates during the period between the date an award is granted and the date such award vests, is exercised, is distributed or expires, as determined by the plan administrator.

Performance Awards. Performance awards include any of the foregoing awards that are granted subject to vesting and/or payment based on the attainment of specified performance goals or other criteria the plan administrator may determine, which may or may not be objectively determinable. Performance criteria upon which performance goals are established by the plan administrator may include but are not limited to: (1) the attainment by a share of a specified fair market value for a specified period of time; (2) book value per share; (3) earnings per share; (4) return on assets; (5) return on equity; (6) return on investments; (7) return on invested capital; (8) total stockholder return; (9) earnings or net income of the company before or after taxes and/or interest; (10) earnings before interest, taxes, depreciation and amortization; (11) revenue; (12) market share; (13) cash flow or cost reduction; (14) interest expense after taxes; (15) economic value created; (16) improvements in capital structure; (17) gross margin; (18) operating margin; (19) net cash provided by operations; (20) strategic business criteria, consisting of one or more objectives based on meeting specified market penetration, geographic business expansion goals, cost targets, customer satisfaction, reductions in errors and omissions, reductions in lost business, management of employment practices and employee benefits, supervision of litigation and information technology, quality and quality audit scores, efficiency, working capital, goals relating to acquisitions or divestitures, land management, net sales or closings, inventory control, inventory, land or lot improvement or reduction, implementation or completion of critical projects, economic value; (21) adjusted earnings or loss per share; (22) employee satisfaction; (23) certain financial ratios (including those measuring liquidity, activity, profitability or leverage); (24) debt levels, covenants, ratios or reductions; (25) financing and other capital raising transactions; (26) year-end cash; (27) investment sourcing activity; (28) marketing initiatives or (29) any combination of the foregoing, any of which may be measured either in absolute terms for us or any operating unit of our company or as compared to any incremental increase or decrease or as compared to results of a peer group or to market performance indicators or indices.

Certain Transactions. The plan administrator has broad discretion to take action under the 2019 Plan, as well as make adjustments to the terms and conditions of existing and future awards, to prevent the dilution or enlargement of intended benefits and facilitate necessary or desirable changes in the event of certain transactions and events affecting our common stock, such as stock dividends, stock splits, mergers, acquisitions, consolidations and other corporate transactions. In addition, in the event of certain non-reciprocal transactions with our stockholders known as “equity restructurings,” the plan administrator will make equitable adjustments to the 2019 Plan and outstanding awards. In the event of a change in control of our company (as defined in the 2019 Plan), to the extent that the

surviving entity declines to continue, convert, assume or replace outstanding awards, then all such awards will become fully vested and exercisable in connection with the transaction. Upon or in anticipation of a change of control, the plan administrator may cause any outstanding awards to terminate at a specified time in the future and give the participant the right to exercise such awards during a period of time determined by the plan administrator in its sole discretion. Individual award agreements may provide for additional accelerated vesting and payment provisions.

Foreign Participants, Claw-Back Provisions, Transferability, and Participant Payments. The plan administrator may modify award terms, establish subplans and/or adjust other terms and conditions of awards, subject to the share limits described above, in order to facilitate grants of awards subject to the laws and/or stock exchange rules of countries outside of the United States. All awards will be subject to the provisions of any claw-back policy implemented by our company to the extent set forth in such claw-back policy and/or in the applicable award agreement. With limited exceptions for estate planning, domestic relations orders, certain beneficiary designations and the laws of descent and distribution, awards under the 2019 Plan are generally non-transferable prior to vesting, and are exercisable only by the participant. With regard to tax withholding, exercise price and purchase price obligations arising in connection with awards under the 2019 Plan, the plan administrator may, in its discretion, accept cash or check, shares of our common stock that meet specified conditions, a "market sell order" or such other consideration as it deems suitable.

Plan Amendment and Termination. Our board of directors may amend or terminate the 2019 Plan at any time; however, except in connection with certain changes in our capital structure, stockholder approval will be required for any amendment that increases the number of shares available under the 2019 Plan, "reprices" any stock option or SAR, or cancels any stock option or SAR in exchange for cash or another award when the option or SAR price per share exceeds the fair market value of the underlying shares. No award may be granted pursuant to the 2019 Plan after the tenth anniversary of the date on which our board of directors adopts the 2019 Plan.

2019 Employee Stock Purchase Plan

In connection with the offering, we intend to adopt the ESPP, which will become effective on the day prior to the public trading date of our common stock. The material terms of the ESPP, as it is currently contemplated, are summarized below. Our board of directors is still in the process of developing, approving and implementing the ESPP and, accordingly, this summary is subject to change.

Shares Available; Administration. We expect a total of shares of our common stock to be initially reserved for issuance under our ESPP. In addition, we expect that the number of shares available for issuance under the ESPP will be annually increased on January 1 of each calendar year beginning in 2020 and ending in 2029, by an amount equal to . In no event will more than shares of our common stock be available for issuance under the ESPP.

Our board of directors or a committee designated by our board of directors will have authority to interpret the terms of the ESPP and determine eligibility of participants. We expect that the compensation committee will be the administrator of the ESPP.

Eligibility. The plan administrator may designate certain of our subsidiaries as participating "designated subsidiaries" in the ESPP and may change these designations from time to time. Employees of our company and our designated subsidiaries are eligible to participate in the ESPP if they meet the eligibility requirements under the ESPP established from time to time by the plan administrator. However, an employee may not be granted rights to purchase stock under the ESPP if such employee, immediately after the grant, would own (directly or through attribution) stock possessing 5% or more of the total combined voting power or value of all classes of our common or other class of stock.

If the grant of a purchase right under the ESPP to any eligible employee who is a citizen or resident of a foreign jurisdiction would be prohibited under the laws of such foreign jurisdiction or the grant of a purchase right to such employee in compliance with the laws of such foreign jurisdiction would cause the ESPP to violate the requirements of Section 423 of the Code, as determined by the plan administrator in its sole discretion, such employee will not be permitted to participate in the ESPP.

Eligible employees become participants in the ESPP by enrolling and authorizing payroll deductions by the deadline established by the plan administrator prior to the relevant offering date. Directors who are not employees, as well as consultants, are not eligible to participate. Employees who choose not to participate, or are not eligible to participate at the start of an offering period but who become eligible thereafter, may enroll in any subsequent offering period.

Participation in an Offering. We intend for the ESPP to qualify under Section 423 of the Code and stock will be offered under the ESPP during offering periods. The length of offering periods under the ESPP will be determined by the plan administrator and may be up to 27 months long. Employee payroll deductions will be used to purchase shares on each purchase date during an offering period. While we expect there will be purchase periods within each offering period, the number of purchase periods within, and purchase dates during, each offering period will be established by the plan administrator. Offering periods under the ESPP will commence when determined by the plan administrator. The plan administrator may, in its discretion, modify the terms of future offering periods.

We expect that the ESPP will permit participants to purchase our common stock through payroll deductions of up to % of their eligible compensation, which will include . The plan administrator will establish a maximum number of shares that may be purchased by a participant during any offering period or purchase period, which, in the absence of a contrary designation, will be shares. In addition, no employee will be permitted to accrue the right to purchase stock under the ESPP at a rate in excess of $25,000 worth of shares during any calendar year during which such a purchase right is outstanding (based on the fair market value per share of our common stock as of the first day of the offering period).

On the first trading day of each offering period, each participant automatically will be granted an option to purchase shares of our common stock. The option will be exercised on the applicable purchase date(s) during the offering period, to the extent of the payroll deductions accumulated during the applicable purchase period. We expect that the purchase price of the shares, in the absence of a contrary determination by the plan administrator, will be % of the lower of the fair market value of our common stock on the first trading day of the offering period or on the applicable purchase date, which will be the final trading day of the applicable purchase period.

Participants may voluntarily end their participation in the ESPP at any time at least one week prior to the end of the applicable offering period (or such longer or shorter period specified by the plan administrator), and will be paid their accrued payroll deductions that have not yet been used to purchase shares of common stock. Participation ends automatically upon a participant's termination of employment.

Transferability. A participant may not transfer rights granted under the ESPP other than by will, the laws of descent and distribution or as otherwise provided in the ESPP.

Certain Transactions. In the event of certain transactions or events affecting our common stock, such as any stock dividend or other distribution, change in control, reorganization, merger, consolidation or other corporate transaction, the plan administrator will make equitable adjustments to the ESPP and outstanding rights. In addition, in the event of the foregoing transactions or events or certain significant transactions, including a change in control, the plan administrator may provide for

(i) either the replacement of outstanding rights with other rights or property or termination of outstanding rights in exchange for cash, (ii) the assumption or substitution of outstanding rights by the successor or survivor corporation or parent or subsidiary thereof, (iii) the adjustment in the number and type of shares of stock subject to outstanding rights, (iv) the use of participants' accumulated payroll deductions to purchase stock on a new purchase date prior to the next scheduled purchase date and termination of any rights under ongoing offering periods or (v) the termination of all outstanding rights. Under the ESPP, a change in control has the same definition as given to such term in the 2019 Plan.

Plan Amendment; Termination. The plan administrator may amend, suspend or terminate the ESPP at any time. However, stockholder approval of any amendment to the ESPP must be obtained for any amendment which increases the aggregate number or changes the type of shares that may be sold pursuant to rights under the ESPP, changes the corporations or classes of corporations whose employees are eligible to participate in the ESPP, or changes the ESPP in any manner that would cause the ESPP to no longer be an employee stock purchase plan within the meaning of Section 423(b) of the Code. The ESPP will terminate on the tenth anniversary of the date it is initially approved by our board of directors.

Limitations of Liability and Indemnification Matters

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that we will indemnify our directors and officers to the fullest extent permitted by the Delaware General Corporation Law, which prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

- any breach of the director's duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Our amended and restated certificate of incorporation and our amended and restated bylaws also provide that if Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. This limitation of liability does not apply to liabilities arising under the federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation and our amended and restated bylaws also provide that we shall have the power to indemnify our employees and agents to the fullest extent permitted by law. Our amended and restated bylaws also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in this capacity, regardless of whether our amended and restated bylaws would permit indemnification. We have obtained directors' and officers' liability insurance.

We have entered into separate indemnification agreements with our directors and executive officers, in addition to indemnification provided for in our amended and restated certificate of incorporation and amended and restated bylaws. These agreements, among other things, provide for indemnification of our directors and executive officers for expenses, judgments, fines and settlement amounts incurred by this person in any action or proceeding arising out of this person's services as a director or executive officer or at our request. We believe that these provisions in our amended and restated certificate of incorporation and amended and restated bylaws and indemnification agreements are necessary to attract and retain qualified persons as directors and executive officers.

The above description of the indemnification provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and our indemnification agreements is not complete and is qualified in its entirety by reference to these documents, each of which is filed as an exhibit to the registration statement of which this prospectus is a part.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

The following includes a summary of transactions since January 1, 2016 to which we have been a party in which the amount involved exceeded or will exceed $120,000 (or, if less, 1% of the average of our total assets amounts as of December 31, 2016, 2017 and 2018), and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described under “Executive and Director Compensation.” We also describe below certain other transactions with our directors, executive officers and stockholders.

Redeemable Convertible Preferred Stock, Convertible Promissory Notes and Warrant Financings

Series E Redeemable Convertible Preferred Stock and Warrant Financing.

In January 2016, we entered into an agreement to issue shares of Series E redeemable convertible preferred stock, pursuant to which we sold to investors in an initial closing and subsequent closing in January 2016 and March 2016, respectively, in private placements an aggregate of 83,406,724 shares of Series E redeemable convertible preferred stock at a purchase price of $0.25 per share, for an aggregate purchase price of $16.9 million, including the conversion of previously outstanding convertible promissory notes and accrued interest thereon of approximately $11.6 million. Pursuant to the purchase agreement, we also issued to the investors warrants, or the 2016 Warrants, exercisable for up to an aggregate of 166,813,448 shares of our common stock. The 2016 Warrants are immediately exercisable at an exercise price of $0.01 per share, and expire in 2026.

In conjunction with the issuance of the Series E redeemable convertible preferred stock pursuant to the purchase agreement, existing investors exchanged an aggregate of 105,610, 41,509,393, 7,112,819, and 34,415,512, of previously outstanding shares of Series A-3, Series B-3, Series C, and Series D redeemable convertible preferred stock, respectively, for an aggregate of 83,143,334 shares of Series E redeemable convertible preferred stock.

As a result of the Series E financing, outstanding warrants issued in October 2015, or the 2015 Warrants, became exercisable for 2,688,181 shares of our Series E redeemable convertible preferred stock. The 2015 Warrants are immediately exercisable at an exercise price of $0.25 per share, and expire in October 2020.

2016 and 2017 Convertible Promissory Note Financings.

In June 2016, we entered into a note purchase agreement with certain existing holders of our redeemable convertible preferred stock pursuant to which we sold, in a private placement, an aggregate of $2.1 million of convertible promissory notes, or the June 2016 Notes. The June 2016 Notes accrued interest at a rate of 8% per annum and were due six months from the date of issuance, subject to their earlier conversion in the event we completed a qualified equity financing or a qualified initial public offering, or at the option of the investor at any time prior to the maturity date or upon the occurrence of a liquidation (as defined in our sixteenth amended and restated certificate of incorporation). In December 2016, we entered into an amendment to the convertible promissory notes issued in June 2016 to extend the maturity date to June 12, 2017.

In August 2016, we entered into a note purchase agreement with certain existing holders of our redeemable convertible preferred stock pursuant to which we sold, in a private placement, an aggregate of $1.0 million of convertible promissory notes, or the August 2016 Notes. The August 2016 Notes accrued interest at a rate of 8% per annum and were due six months from the date of issuance, subject to their earlier conversion in the event we completed a qualified equity financing or a qualified

initial public offering, or at the option of the investor at any time prior to the maturity date or upon the occurrence of a liquidation (as defined in our sixteenth amended and restated certificate of incorporation). In March 2017, we entered into an amendment to the convertible promissory notes issued in August 2016 to extend the maturity date to December 31, 2017.

In October 2016, we entered into a note purchase agreement with certain existing holders of our redeemable convertible preferred stock pursuant to which we sold, in a private placement, an aggregate of $1.0 million of convertible promissory notes. The October 2016 Notes accrued interest at a rate of 8% per annum and were due six months from the date of issuance, subject to their earlier conversion in the event we completed a qualified equity financing or a qualified initial public offering, or at the option of the investor at any time prior to the maturity date or upon the occurrence of a liquidation (as defined in our sixteenth amended and restated certificate of incorporation). In March 2017, we entered into an amendment to the convertible promissory notes issued in October 2016 to extend the maturity date to December 31, 2017.

In November 2016, we entered into a note purchase agreement with certain existing holders of our redeemable convertible preferred stock pursuant to which we sold, in a private placement, an aggregate of $1.0 million of convertible promissory notes. The November 2016 Notes accrued interest at a rate of 8% per annum and were due six months from the date of issuance, subject to their earlier conversion in the event we completed a qualified equity financing or a qualified initial public offering, or at the option of the investor at any time prior to the maturity date or upon the occurrence of a liquidation (as defined in our sixteenth amended and restated certificate of incorporation).

In December 2016, we entered into a note purchase agreement with certain existing holders of our redeemable convertible preferred stock pursuant to which we sold, in a private placement, an aggregate of $1.0 million of convertible promissory notes. The December 2016 Notes accrued interest at a rate of 8% per annum and were due six months from the date of issuance, subject to their earlier conversion in the event we completed a qualified equity financing or a qualified initial public offering, or at the option of the investor at any time prior to the maturity date or upon the occurrence of a liquidation (as defined in our sixteenth amended and restated certificate of incorporation).

In January 2017, we entered into a note purchase agreement with certain existing holders of our redeemable convertible preferred stock pursuant to which we sold, in a private placement, an aggregate of $1.0 million of convertible promissory notes. The January 2017 Notes accrued interest at a rate of 8% per annum and were due six months from the date of issuance, subject to their earlier conversion in the event we completed a qualified equity financing or a qualified initial public offering, or at the option of the investor at any time prior to the maturity date or upon the occurrence of a liquidation (as defined in our sixteenth amended and restated certificate of incorporation).

In February 2017, we entered into a note purchase agreement with certain existing holders of our redeemable convertible preferred stock pursuant to which we sold, in a private placement, an aggregate of $1.5 million of convertible promissory notes. The February 2017 Notes accrued interest at a rate of 8% per annum and were due six months from the date of issuance, subject to their earlier conversion in the event we completed a qualified equity financing or a qualified initial public offering, or at the option of the investor at any time prior to the maturity date or upon the occurrence of a liquidation (as defined in our sixteenth amended and restated certificate of incorporation).

In April 2017, we entered into a note purchase agreement with certain existing holders of our redeemable convertible preferred stock pursuant to which we sold, in a private placement, an aggregate of $1.3 million of convertible promissory notes. The April 2017 Notes accrued interest at a rate of 8% per annum and were due six months from the date of issuance, subject to their earlier conversion in the event we completed a qualified equity financing or a qualified initial public offering, or

at the option of the investor at any time prior to the maturity date or upon the occurrence of a liquidation (as defined in our sixteenth amended and restated certificate of incorporation).

The June 2016 Notes, August 2016 Notes, October 2016 Notes, November 2016 Notes, December 2016 Notes, January 2017 Notes, February 2017 Notes and April 2017 Notes are collectively referred to herein as the 2016 / 2017 Notes. Each of the 2016 / 2017 Notes were subordinated to borrowings under our Term Loan Agreement, dated October 10, 2013, with Capital Royalty Partners II L.P., Capital Royalty Partners II—Parallel Fund "A" L.P., Parallel Investment Opportunities Partners II L.P.

In May 2017, in conjunction with the issuance of Series F redeemable convertible preferred stock, the outstanding principal and accrued interest thereon of each of the 2016 / 2017 Notes, totaling $10.2 million, was converted into 163,785,334 shares of Series F redeemable convertible preferred stock.

Series F Redeemable Convertible Preferred Stock Financing.

In May 2017, we entered into an agreement to issue shares of Series F redeemable convertible preferred stock, which agreement was subsequently amended in August 2017, pursuant to which we sold to investors in an initial closing in May 2017 and subsequent closings between August 2017 and January 2018, in private placements an aggregate of 339,484,788 shares of Series F redeemable convertible preferred stock at a purchase price of $0.078 per share, for an aggregate purchase price of $23.9 million, including the conversion of the outstanding principal and accrued interest on the 2016/2017 Notes of approximately $10.2 million into 163,785,334 shares of our Series F redeemable convertible preferred stock.

Series G Redeemable Convertible Preferred Stock Financing.

In January 2019, we entered into an agreement to issue shares of our Series G redeemable convertible preferred stock, pursuant to which we sold to investors in a private placement an aggregate of 88,030,905 shares of our Series G redeemable convertible preferred stock at a purchase price of $0.078 per share, for an aggregate purchase price of approximately $6.9 million.

Each share of, or warrants exercisable for shares of, Series E redeemable convertible preferred stock identified in the following table will convert into 3.21 shares of, or warrants exercisable for 3.21 shares of, common stock, upon completion of this offering; however such warrants will terminate in connection with this offering because the exercise prices for these warrants are expected to be higher than the assumed initial public offering price of this offering and these warrants otherwise terminate by their terms if not exercised prior to the completion of this offering. Each share of Series F redeemable convertible preferred stock and Series G redeemable convertible preferred stock will convert into one share of common stock upon completion of this offering.

The following table sets forth the aggregate number of these securities acquired by the listed directors, executive officers or holders of more than 5% of our capital stock, or their affiliates since January 1, 2016.

Participants	Series E Redeemable Convertible Preferred Stock	Warrants to Purchase Series E Redeemable Convertible Preferred Stock	Series F Redeemable Convertible Preferred Stock	Series G Redeemable Convertible Preferred Stock	Common Stock	Warrants to Purchase Common Stock
5% or Greater Stockholders(1)						
Entities affiliated with NMSIC Co-Investment Fund, L.P.(2)	64,239,884	1,135,886	112,958,220	19,230,769	–	64,239,884
Entities affiliated with Tullis-Dickerson Capital Focus III, L.P.(3)	53,251,030	658,823	81,166,266	9,615,384	–	53,251,030
Hunt Holdings, L.P.	37,096,550	604,864	60,028,640	17,133,472	–	37,096,550
Burrell Diversified Holdings, LLC	–	–	64,102,565	–	–	–
Directors						
Ebetuel Pallares, Ph.D.(4)	4,423,371	219,978	7,970,686	–	–	4,534,430
James L.L. Tullis(2)(5)	–	–	7,991,249	–	–	–

(1) Additional details regarding these stockholders and their equity holdings are provided herein under “Principal Stockholders.”

(2) Represents securities held by NMSIC Co-Investment Fund, L.P. and NMSIC Focused LLC.

(3) Represents securities held by Tullis-Dickerson Capital Focus III, L.P., Tullis Growth Fund, L.P. and Tullis Growth Fund II, L.P.

(4) Represents securities held by PCM/Exagen, L.P. (formerly known as CCP/Exagen, L.P.).

(5) Represents securities held by James L.L. Tullis, Linda A. Tullis and the HPS Irrevocable Trust #3 U/A Dtd 7/6/93.

Some of our directors are associated with our principal stockholders as indicated in the table below:

Director	Principal Stockholder
Brian Birk	NMSIC Co-Investment Fund, L.P.
James L.L. Tullis	Tullis-Dickerson Capital Focus III, L.P.
Dan Burrell	Burrell Diversified Holdings, LLC

Investors’ Rights Agreement

We entered into an amended and restated investors’ rights agreement in January 2019 with the holders of our redeemable convertible preferred stock, including entities with which certain of our directors are affiliated. This agreement provides for certain rights relating to the registration of their shares of common stock issuable upon conversion of their redeemable convertible preferred stock and certain additional covenants made by us. Except for the registration rights (including the related provisions pursuant to which we have agreed to indemnify the parties to the investors’ rights agreement), all rights under this agreement will terminate upon completion of this offering. The registration rights will continue following this offering and will terminate three years following the completion of this offering, or for any particular holder with registration rights, at such time following this offering when such holder holds less than one percent of our outstanding common stock and may immediately sell all of such shares pursuant to Rule 144 under the Securities Act in a 90-day period. See “Description of Capital Stock—Registration Rights” for additional information.

Stockholders' Agreement

We entered into an amended and restated stockholders' agreement in January 2019, by and among us and certain of our stockholders, pursuant to which the following directors were each elected to serve as members on our board of directors and, as of the date of this prospectus, continue to serve: Brian Birk, Dan Burrell, Ebetuel Pallares, Ph.D., Ron Rocca, James L.L. Tullis and Arthur Weinstein. Pursuant to the amended and restated stockholders' agreement, Mr. Rocca, as our Chief Executive Officer, was initially selected to serve on our board of directors as a representative of holders of our common stock, as designated by a majority of our common stockholders. Mr. Birk, Mr. Tullis, Dr. Pallares and Mr. Burrell were initially selected to serve on our board of directors as representatives of holders of our redeemable convertible preferred stock, as designated by NMSIC Co-Investment Fund, L.P., Tullis-Dickerson Capital Focus III, L.P. and PCM/Exagen, L.P. (formerly known as CCP/Exagen, L.P.) and Burrell Diversified Investments, LLC, respectively. Dr. Weinstein was selected to serve on our board of directors as designated by the holders of at least 52% of our outstanding Series G, Series F, Series E, Series D, Series C, and Series B-3 redeemable convertible preferred stock, voting together as a single class. The amended and restated stockholders' agreement also provides for certain other rights, including among others, a right of first refusal to purchase future securities.

The amended and restated stockholders' agreement, and all the rights granted pursuant to it, will terminate upon the completion of this offering, and members previously elected to our board of directors pursuant to this agreement will continue to serve as directors until they resign, are removed or their successors are duly elected by holders of our common stock. The composition of our board of directors after this offering is described in more detail under "Management—Board Composition and Election of Directors."

New Mexico Lease

In 2016 and 2017, we leased office space in New Mexico from a third party which specializes in providing outsourced information technology support services, and a partner in this company was an immediate family member of Wendy Rollstin, our former Chief Financial Officer. We also used the information technology support services of this third party during 2016 and 2017. As of December 31, 2017, we no longer lease this facility and Ms. Rollstin is no longer employed by us. Total expenses related to rent expense and information technology support services provided by this related party for the years ended December 31, 2017 and 2016 was $179,000 and $194,000, respectively.

Employment Agreements

We have entered into an offer letter with Dr. Dervieux. For more information regarding this agreement, see the section in this prospectus entitled "Executive and Director Compensation—Narrative Disclosure to Summary Compensation Table—Offer Letter with Thierry Dervieux, Ph.D."

In September 2011, we entered into a license agreement with Dr. Dervieux and his company, DeNovo. The license agreement, covering novel methods for monitoring low-dose methotrexate therapy, relates to technology developed by Dr. Dervieux prior to joining us. The technology has yet to be used by us. Under the agreement, Dr. Dervieux would be eligible to receive up to $600,000 when and if we achieve certain sales milestones and a single-digit percentage royalty on sales on an ongoing basis.

Indemnification Agreements

We have entered into indemnification agreements with each of our directors and executive officers prior to the completion of this offering. These agreements, among other things, require us or will require us to indemnify each director (and in certain cases their related venture capital funds) and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses

such as attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person's services as a director or executive officer.

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that we will indemnify each of our directors and officers to the fullest extent permitted by the Delaware General Corporation Law. Further, we have entered into indemnification agreements with each of our directors and officers, and we have purchased a policy of directors' and officers' liability insurance that insures our directors and officers against the cost of defense, settlement or payment of a judgment under certain circumstances. For further information, see "Executive and Director Compensation—Limitations of Liability and Indemnification Matters."

Stock Option Grants to Executive Officers and Directors

We have granted stock options to our executive officers and certain of our directors as more fully described in the section entitled "Executive and Director Compensation."

Policies and Procedures for Related Person Transactions

Our board of directors will adopt written related person transaction policy, to be effective upon the completion of this offering, setting forth the policies and procedures for the review and approval or ratification of related-person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which we were or are to be a participant, where the amount involved exceeds $120,000 and a related person had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person. In reviewing and approving any such transactions, our audit committee is tasked to consider all relevant facts and circumstances, including, but not limited to, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction and the extent of the related person's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our common stock as of January 31, 2019, and as adjusted to reflect the sale of shares of common stock in this offering, by:

- each of our named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each person or group of affiliated persons known by us to beneficially own more than 5% of our common stock.

The number of shares beneficially owned by each stockholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which a person has sole or shared voting power or investment power. Applicable percentage ownership is based on 1,055,052,879 shares of common stock outstanding as of January 31, 2019, which gives effect to the automatic conversion of all outstanding shares of redeemable convertible preferred stock into 1,043,474,958 shares of common stock. Our calculation of beneficial ownership after the offering gives additional effect to the issuance of shares of common stock in this offering at the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of common stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days of January 31, 2019 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

Unless otherwise indicated, the address of each beneficial owner listed below is c/o Exagen Inc., 1261 Liberty Way, Suite C, Vista, California 92081. We believe, based on information provided to us that each of the stockholders listed below has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name of Beneficial Owner	Shares Beneficially Owned Prior to Offering		Shares Beneficially Owned After Offering	
	Number	Percentage	Number	Percentage
5% or Greater Stockholders				
Entities affiliated with NMSIC Co-Investment Fund, L.P.(1)	441,864,229	39.5%		%
Entities Affiliated with Tullis-Dickerson Capital Focus III, L.P.(2)	332,653,634	30.0%		%
Hunt Holdings, L.P.(3)	237,773,142	21.8%		%
Burrell Diversified Investments, LLC(4)	64,102,565	6.1%		%
Named Executive Officers and Directors				
Fortunato Ron Rocca	–	*		%
Kamal Adawi	–	*		%
Thierry Dervieux, Ph.D.	–	*		%
Brian Birk(1)	441,864,229	39.5%		%
Dan Burrell(4)	64,102,565	6.1%		%
Ebetuel Pallares, Ph.D.(5)	26,715,558	2.5%		%
James L.L. Tullis(2)(6)	340,644,884	30.7%		%
Arthur Weinstein, M.D.(7)	158,333	*		%
All executive officers and directors as a group (8 persons)(8)	873,485,699	74.2%		%

* Less than 1%.

(1) Consists of (a) 121,142,875 shares of common stock held by NMSIC Co-Investment Fund, L.P., or NMSIC, and (b) 256,481,470 shares of common stock, 64,239,884 shares of common stock issuable upon the exercise of warrants to purchase common stock, held by NMSIC Focused, LLC, or NMSIC Focused. Excludes (i) 419,455 shares of common stock issuable upon the exercise of warrants to purchase common stock, and (ii) 3,640,660 shares of common stock issuable upon exercise of warrants to purchase shares of Series E redeemable convertible preferred stock held by NMSIC Focused, all of which warrants will terminate in connection with this offering because the exercise prices for these warrants are expected to be higher than the initial public offering price of this offering. The general partner of NMSIC is Sun Mountain Capital Partners LLC, or Sun Mountain. NMSIC is the sole member of NMSIC Focused. The members of Sun Mountain are Brian Birk, one of our directors, Sally Corning, Lee Rand and Leslie Shaw. As a result, each of Sun Mountain, Mr. Birk, Ms. Corning, Mr. Rand and Ms. Shaw may be deemed to possess voting and investment control over, and may be deemed to have indirect beneficial ownership with respect to, all shares held by NMSIC or NMSIC Focused. Neither Sun Mountain, Mr. Birk, Ms. Corning, Mr. Rand nor Ms. Shaw owns directly any of the shares. Each of Sun Mountain, Mr. Birk, Ms. Corning, Mr. Rand and Ms. Shaw disclaims beneficial ownership of the shares held by NMSIC or NMSIC Focused, except to the extent of their pecuniary interest therein. The address for each of the NMSIC entities is 301 Griffin Street, Santa Fe, New Mexico 87501.

(2) Consists of (a) 182,942,258 shares of common stock and 21,951,224 shares of common stock issuable upon the exercise of warrants to purchase common stock held by Tullis-Dickerson Capital Focus III, L.P., or Tullis, (b) 86,844,962 shares of common stock and 31,299,806 shares of common stock issuable upon the exercise of warrants to purchase common stock held by Tullis Growth Fund, L.P, and (c) 9,615,384 shares of common stock held by Tullis Growth Fund II, L.P. Excludes (i) 250,000 shares of common stock issuable upon the exercise of warrants to purchase common stock and 7,990 shares of common stock issuable upon exercise of warrants to purchase shares of Series E redeemable convertible preferred stock held by Tullis, and (ii) 2,103,624 shares of common stock issuable upon exercise of warrants to purchase shares of Series E redeemable convertible preferred stock held by Tullis Growth Fund, L.P., all of which warrants will terminate in connection with this offering because the exercise prices for these warrants are expected to be higher than the initial public offering price of this offering. Tullis-Dickerson Partners III, LLC and Tullis Growth Fund, L.P. are general partners of Tullis. James

L.L. Tullis, one of our directors, is a Principal of Tullis-Dickerson Partners III, LLC., Tullis Growth Fund, L.P. and Tullis Growth Fund II, L.P. As a result, each of Tullis-Dickerson Partners III, LLC, Tullis Growth Fund, L.P., Tullis Growth Fund II, L.P. and Mr. Tullis may be deemed to possess voting and investment control over, and may be deemed to have an indirect beneficial ownership with respect to, all shares held by Tullis, and Mr. Tullis may be deemed to possess voting and investment control over, and may be deemed to have an indirect beneficial ownership with respect to, all shares held by Tullis Growth Fund, L.P. and Tullis Growth Fund II, L.P. The address for each of the Tullis entities is 500 West Putnam Avenue, Suite 400, Stamford, Connecticut 06830.

(3) Consists of 200,676,592 shares of common stock, 37,096,550 shares of common stock issuable upon the exercise of warrants to purchase common stock held by Hunt Holdings, L.P. Excludes (i) 263,347 shares of common stock issuable upon the exercise of warrants to purchase common stock and 1,938,666 shares of common stock issuable upon exercise of warrants to purchase shares of Series E redeemable convertible preferred stock held by Hunt Holdings, L.P. The address for each of the Tullis entities is c/o Josph Advisory Services, LLC, 3800 N. Mesa St., Suite A-2, #371, El Paso, Texas 79902.

(4) Consists of 64,102,565 shares of common stock held by Burrell Diversified Investments, LLC. Mr. Burrell is the operating manager of Burrell Diversified Investments, LLC. As a result, Mr. Burrell may be deemed to possess voting and investment control over, and may be deemed to have an indirect beneficial ownership with respect to, all shares held by Burrell Diversified Investments, LLC. The address for Burrell Diversified Investment, LLC is 231 Washington Avenue, Suite C Santa Fe, New Mexico 87501.

(5) Consists of 22,181,128 shares of common stock and 4,534,430 shares of common stock issuable upon the exercise of warrants to purchase common stock held by PCM/Exagen, L.P., or PCM. Excludes (i) 36,654 shares of common stock issuable upon the exercise of warrants to purchase common stock and 705,057 shares of common stock issuable upon exercise of warrants to purchase shares of Series E redeemable convertible preferred stock held by PCM. Dr. Pallares, one of our directors, is a co-manager of PCM. As a result, each of PCM and Dr. Pallares may be deemed to possess voting and investment control over, and may be deemed to have an indirect beneficial ownership with respect to, all shares held by PCM. Prior to August 6, 2015, PCM was previously known as CCP/Exagen L.P.

(6) Consists of (a) 6,895,096 shares of common stock held by James L.L. Tullis, (b) 262,821 shares of common stock held by Linda A. Tullis, and (c) 833,333 shares of common stock held by the HPS Irrevocable Trust #3 U/A Dtd 7/6/93.

(7) Consists of 158,333 shares which Dr. Weinstein has the right to acquire pursuant to outstanding options which are or will be immediately exercisable within 60 days of January 31, 2019.

(8) Includes shares of common stock issuable upon the exercise of outstanding options, which are or will be immediately exercisable within 60 days of January 31, 2019, as set forth in the previous footnotes.

DESCRIPTION OF CAPITAL STOCK

General

The following description summarizes some of the terms of our amended and restated certificate of incorporation and amended and restated bylaws, our outstanding warrants, the amended and restated investors' rights agreement and of the Delaware General Corporation Law. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description you should refer to our amended and restated certificate of incorporation, amended and restated bylaws, warrants and amended and restated investors' rights agreement, copies of which have been filed or incorporated by reference as exhibits to the registration statement of which the prospectus is a part, as well as the relevant provisions of the Delaware General Corporation Law.

Following the completion of this offering, our authorized capital stock will consist of shares of common stock, $0.001 par value per share, shares of preferred stock, $0.001 par value per share.

Common Stock

As of December 31, 2018, there were shares of our common stock outstanding and held of record by stockholders, assuming (i) the automatic conversion of all outstanding shares of our redeemable convertible preferred stock into shares of common stock, which will occur immediately prior to the completion of this offering, and (ii) the issuance of shares of common stock as a result of the expected net exercise of certain outstanding warrants we issued in 2013 that have an exercise price of $0.01 per share, or the 2013 Warrants, in connection with the completion of this offering, assuming an initial public offering price of $ per share, the midpoint of the price range on the cover page of this prospectus, which 2013 Warrants will terminate if not exercised prior to the completion of this offering. Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders, including the election of directors, and do not have cumulative voting rights. Accordingly, the holders of a majority of the outstanding shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they so choose, other than any directors that holders of any preferred stock we may issue may be entitled to elect. Subject to the supermajority votes for some matters, other matters shall be decided by the affirmative vote of our stockholders having a majority in voting power of the votes cast by the stockholders present or represented and voting on such matter. Our amended and restated certificate of incorporation and amended and restated bylaws also provide that our directors may be removed only for cause and only by the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon. In addition, the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon is required to amend or repeal, or to adopt any provision inconsistent with, several of the provisions of our amended and restated certificate of incorporation. See below under "—Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws—Amendment of Charter Provisions."

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared by the board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, the holders of common stock will be entitled to share ratably in the assets legally available for distribution to stockholders after the payment of or provision for all of our debts and other liabilities, subject to the prior rights of any preferred stock then outstanding. Holders of common stock have no preemptive or conversion rights or other subscription rights and there are no redemption or sinking funds provisions applicable to the common stock. All outstanding shares of common stock are, and the common stock to be outstanding upon the closing of this offering will be, duly authorized, validly issued, fully paid and nonassessable. The rights, preferences and privileges of holders of common stock are subject to and

may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Upon completion of this offering, all of our previously outstanding shares of redeemable convertible preferred stock will have been converted into common stock, there will be no authorized shares of our previously redeemable convertible preferred stock and we will have no shares of preferred stock outstanding. Under the terms of our amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, our board of directors has the authority, without further action by our stockholders, to issue up to shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the dividend, voting and other rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Options

As of December 31, 2018, options to purchase 121,423,047 shares of our common stock were outstanding under our 2002 Plan and 2013 Plan, of which 3,594,210 were vested and exercisable as of that date. For additional information regarding the terms of this plan, see “Executive and Director Compensation—Equity Incentive Award Plans.”

Warrants

As of December 31, 2018, 171,669,386 shares of our common stock were issuable upon the exercise of outstanding warrants to purchase common stock, with a weighted-average exercise price of $0.05 per share. Following the completion of this offering, 166,813,448 of these warrants to purchase shares of our common stock will be exercisable for an aggregate of shares of our common stock at an exercise price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus. If the remaining warrants to purchase common stock are not exercised prior to the completion of this offering, they will terminate. Of the remaining warrants, we expect warrants to purchase 3,186,430 shares of common stock with an exercise price of $0.01 per share to be net exercised in connection with the completion of this offering, resulting in the issuance of an aggregate of shares of our common stock assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus.

As of December 31, 2018, 4,174,430 shares of our Series D redeemable convertible preferred stock were issuable upon exercise of outstanding warrants, with an exercise price of $0.25 per share. These warrants are immediately exercisable. Warrants to purchase 3,186,430 shares of our Series D redeemable convertible preferred stock expire in October 2023 and warrants to purchase 988,000 shares of our Series D redeemable convertible preferred stock expire in November 2023. If these warrants are not exercised prior to the completion of this offering, they will terminate.

As of December 31, 2018, 2,688,181 shares of our Series E redeemable convertible preferred stock were issuable upon exercise of outstanding warrants with an exercise price of $0.25 per share.

These warrants are immediately exercisable and expire in October 2020. If these warrants are not exercised prior to the completion of this offering, they will terminate.

As of December 31, 2018, 19,230,769 shares of our Series F redeemable convertible preferred stock were issuable upon exercise of outstanding warrants with an exercise price of $0.078 per share. Upon conversion of the Series F redeemable convertible preferred stock into common stock in connection with the completion of this offering, these 19,230,769 warrants to purchase shares of our Series F preferred stock warrants will become exercisable for an aggregate of shares of our common stock at an exercise price of $ per share. These warrants are immediately exercisable. Warrants to purchase 15,384,615 shares of our Series F redeemable convertible preferred stock will expire in September 2024 and warrants to purchase 3,846,154 shares of our Series F redeemable convertible preferred stock will expire in December 2025.

Each of the above warrants has a net exercise provision under which the holder may, in lieu of payment of the exercise price in cash, surrender the warrant and receive a net amount of shares of our common stock based on the fair market value of our common stock at the time of the net exercise of the warrant after deduction of the aggregate exercise price. These warrants also contain provisions for the adjustment of the exercise price and the aggregate number of shares issuable upon the exercise of the warrants in the event of stock dividends, stock splits, reorganizations and reclassifications and consolidations.

Registration Rights

As of December 31, 2018, upon the completion of this offering, holders of shares of our common stock, which includes all of the shares of common stock issuable upon the automatic conversion of our redeemable convertible preferred stock immediately prior to the completion of this offering will be entitled to the following rights with respect to the registration of such shares for public resale under the Securities Act, pursuant to an investor rights agreement by and among us and certain of our stockholders. The registration of shares of common stock as a result of the following rights being exercised would enable holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective.

Demand Registration Rights

Form S-1. If at any time for a period of three years following the completion of this offering, the holders of at least 50% of the registrable securities request in writing that we effect a registration with respect to their shares in an offering, we may be required to register their shares. We are obligated to effect at most two registrations for the holders of registrable securities in response to these demand registration rights, subject to certain exceptions.

Form S-3. If at any time beginning 180 days following the completion of this offering and we become entitled under the Securities Act to register our shares on Form S-3, a holder of registrable securities requests in writing that we register their shares for public resale on Form S-3 and the price to the public of the offering is $1.0 million or more, we will be required to provide notice to all holders of registrable securities and to use our best efforts to effect such registration; provided, however, that we will not be required to effect such a registration if, within the preceding 12 months, we have already effected two registrations on Form S-3 for the holders of registrable securities.

In each of the above registrations, if the holders requesting registration intend to distribute their shares by means of an underwriting, the managing underwriter of such offering will have the right to limit the numbers of shares to be underwritten for reasons related to the marketing of the shares.

Piggyback Registration Rights

If at any time for a period of three years following the completion of this offering we propose to register any shares of our common stock under the Securities Act, subject to certain exceptions, the

holders of registrable securities will be entitled to notice of the registration and to include their shares of registrable securities in the registration. If our proposed registration involves an underwriting, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares.

Expenses

Ordinarily, other than underwriting discounts and commissions, we will be required to pay all expenses incurred by us related to any registration effected pursuant to the exercise of these registration rights. These expenses may include all registration and filing fees, printing expenses, fees and disbursements of our counsel, reasonable fees and disbursements of a counsel for the selling securityholders, blue sky fees and expenses and the expenses of any special audits incident to the registration.

Termination of Registration Rights

The registration rights terminate upon the earlier of three years after the completion of this offering, or for any particular holder with registration rights, at such time following this offering when such holder holds less than one percent of our outstanding common stock and may immediately sell all of such shares pursuant to Rule 144 under the Securities Act in a 90-day period.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Some provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: an acquisition of us by means of a tender offer; an acquisition of us by means of a proxy contest or otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Undesignated Preferred Stock

The ability of our board of directors, without action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with voting or other rights or preferences as designated by our board of directors could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board, chief executive officer or president, or by a resolution adopted by a majority of our board of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Elimination of Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting.

Staggered Board

Our board of directors is divided into three classes. The directors in each class will serve for a three-year term (other than the directors initially assigned to Class I whose term shall expire at our first annual meeting of stockholders), one class being elected each year by our stockholders. For more information on the classified board, see “Management—Board Composition and Election of Directors.” This system of electing and removing directors may tend to discourage a third-party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Removal of Directors

Our amended and restated certificate of incorporation provides that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two thirds of the total voting power of all of our outstanding voting stock then entitled to vote in the election of directors.

Stockholders Not Entitled to Cumulative Voting

Our amended and restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our preferred stock may be entitled to elect.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed to be “interested stockholders” from engaging in a “business combination” with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation’s voting stock. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors.

Choice of Forum

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative form, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for: (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders, creditors or other constituents; (iii) any action asserting a claim against us arising pursuant to any provision of the General Corporation Law of the State of Delaware or our amended and restated certificate of incorporation or amended and restated bylaws; (iv) any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws; or (v) any action asserting a claim governed by the internal affairs doctrine. The provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. In any case,

stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. Furthermore, our amended and restated certificate of incorporation will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. Our restated certificate of incorporation also provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to this choice of forum provision.

Amendment of Charter Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue preferred stock, would require approval by holders of at least two thirds of the total voting power of all of our outstanding voting stock.

The provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock will be . The transfer agent and registrar's address is .

Nasdaq Global Market

We intend to apply to have our common stock listed on the Nasdaq Global Market under the symbol "XGN."

Limitations of Liability and Indemnification Matters

For a discussion of liability and indemnification, see "Executive and Director Compensation—Limitations of Liability and Indemnification Matters."

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there was no public market for our common stock. Future sales of substantial amounts of common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock. Although we intend to apply to have our common stock listed on Nasdaq, we cannot assure you that there will be an active public market for our common stock.

Based on the number of shares of our common stock outstanding as of December 31, 2018 and assuming (i) the issuance of shares in this offering, (ii) the automatic conversion of all outstanding shares of our redeemable convertible preferred stock into shares of our common stock, which will automatically occur immediately prior to the completion of the offering, (iii) no exercise of the underwriters' option to purchase additional shares of common stock, (iv) the expected net exercise of the 2013 Warrants and (v) no exercise of outstanding options or warrants (other than the 2013 Warrants), we will have outstanding an aggregate of approximately shares of common stock.

Of these shares, all shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act. Shares purchased by our affiliates would be subject to the Rule 144 resale restrictions described below, other than the holding period requirement.

The remaining shares of common stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rule 144 or 701 under the Securities Act, each of which is summarized below. We expect that substantially all of these shares will be subject to the 180-day lock-up period under the lock-up agreements described below.

In addition, of the 121,423,047 shares of our common stock that were subject to stock options outstanding as of December 31, 2018, options to purchase 3,594,210 of such shares of common stock were vested as of such date and, upon exercise, these shares will be eligible for sale subject to the lock–up agreements described below and Rules 144 and 701 under the Securities Act.

Lock-Up Agreements

We, along with our directors, executive officers and substantially all of our securityholders have agreed with the underwriters that for a period of 180 days, after the date of this prospectus, subject to specified exceptions, we or they will not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to sale of, or otherwise dispose of or transfer any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock, request or demand that we file a registration statement related to our common stock or enter into any swap or other agreement that transfers to another, in whole or in part, directly or indirectly, the economic consequence of ownership of the common stock. Upon expiration of the lock-up period, certain of our stockholders and warrantholders will have the right to require us to register their shares under the Securities Act. See "—Registration Rights" below and "Description of Capital Stock—Registration Rights."

Cowen and Company, LLC, Cantor Fitzgerald & Co. and William Blair & Company, L.L.C. may, in their sole discretion and at any time or from time to time before the termination of the lock-up period, without public notice, release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our stockholders who will execute a lock-up agreement providing consent to the sale of shares prior to the expiration of the lock-up period.

Upon the expiration of the lock-up period, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above.

Rule 10b5-1 Trading Plans

Following the completion of this offering, certain of our officers, directors and significant stockholders may adopt written plans, known as Rule 10b5-1 trading plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis to diversify their assets and investments. Under these 10b5-1 trading plans, a broker may execute trades pursuant to parameters established by the officer, director or stockholder when entering into the plan, without further direction from such officer, director or stockholder. Such sales would not commence until the expiration of the applicable lock-up agreements entered into by such officer, director or stockholder in connection with this offering.

Rule 144

Affiliate Resales of Restricted Securities

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours, or who was an affiliate at any time during the 90 days before a sale, who has beneficially owned shares of our common stock for at least six months would be entitled to sell in "broker's transactions" or certain "riskless principal transactions" or to market makers, a number of shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average weekly trading volume in our common stock on Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Affiliate resales under Rule 144 are also subject to the availability of current public information about us. In addition, if the number of shares being sold under Rule 144 by an affiliate during any three-month period exceeds 5,000 shares or has an aggregate sale price in excess of $50,000, the seller must file a notice on Form 144 with the SEC and the Nasdaq Global Market concurrently with either the placing of a sale order with the broker or the execution of a sale directly with a market maker.

Non-Affiliate Resales of Restricted Securities

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is not an affiliate of ours at the time of sale, and has not been an affiliate at any time during the three months preceding a sale, and who has beneficially owned shares of our common stock for at least six months but less than a year, is entitled to sell such shares subject only to the availability of current public information about us. If such person has held our shares for at least one year, such person can resell under Rule 144(b)(1) without regard to any Rule 144 restrictions, including the 90-day public company requirement and the current public information requirement.

Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Rule 701

In general, under Rule 701, any of an issuer's employees, directors, officers, consultants or advisors who purchases shares from the issuer in connection with a compensatory stock or option plan

or other written agreement before the effective date of a registration statement under the Securities Act is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of the issuer can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of the issuer can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

Equity Plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under our equity incentive plans and ESPP. We expect to file the registration statement covering shares offered pursuant to these stock plans shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market subject to compliance with the resale provisions of Rule 144.

Registration Rights

As of December 31, 2018, upon the completion of this offering, holders of shares of our common stock, which includes all of the shares of common stock issuable upon the automatic conversion of our redeemable convertible preferred stock immediately prior to the completion of this offering, or their transferees will be entitled to various rights with respect to the registration of these shares under the Securities Act upon the completion of this offering. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by affiliates. See “Description of Capital Stock—Registration Rights” for additional information. Shares covered by a registration statement will be eligible for sale in the public market upon the expiration or release from the terms of the lock-up agreement.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or the IRS, in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the alternative minimum tax or the Medicare contribution tax on net investment income. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers or traders in securities;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans;
- "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds; and
- persons subject to special tax accounting rules as a result of any item of gross income with respect to the stock being taken into account in an "applicable financial statement" (as defined in the Code).

If an entity treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATION PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a "Non-U.S. Holder" is any beneficial owner of our common stock that is neither a "U.S. person" nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (i) is subject to the primary supervision of a U.S. court and the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code), or (ii) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section entitled "Dividend Policy," we do not anticipate declaring or paying dividends to holders of our common stock in the foreseeable future. However, if we do make distributions of cash or property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under "—Sale or Other Taxable Disposition."

Subject to the discussion below on effectively connected income, dividends paid to a Non-U.S. Holder of our common stock will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States.

Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also may be

subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

A Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest, or USRPI, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

Gain described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty), which may be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a Non-U.S. Holder of our common stock will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period.

Non-U.S. Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our common stock will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the holder is a United States person and the holder either certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any dividends on our common stock paid to the Non-U.S. Holder, regardless of whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the United

States or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting, if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a United States person, or the holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the Foreign Account Tax Compliance Act, or FATCA) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (i) the foreign financial institution undertakes certain diligence and reporting obligations, (ii) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (i) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of stock on or after January 1, 2019, recently proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

UNDERWRITING

We and the underwriters for the offering named below have entered into an underwriting agreement with respect to the common stock being offered. Subject to the terms and conditions of the underwriting agreement, each underwriter has severally agreed to purchase from us the number of shares of our common stock set forth opposite its name below. Cowen and Company, LLC, Cantor Fitzgerald & Co. and William Blair & Company, L.L.C. are the representatives of the underwriters.

Underwriter	Number of Shares
Cowen and Company, LLC	
Cantor Fitzgerald & Co.	
William Blair & Company, L.L.C.	
Total	

The underwriting agreement provides that the obligations of the underwriters are subject to certain conditions precedent and that the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased, other than those shares covered by the option to purchase additional shares described below. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Option to Purchase Additional Shares. We have granted to the underwriters an option to purchase up to additional shares of common stock at the public offering price, less the underwriting discount. This option is exercisable for a period of 30 days. To the extent that the underwriters exercise this option, the underwriters will purchase additional shares from us in approximately the same proportion as shown in the table above.

Discounts and Commissions. The following table shows the public offering price, underwriting discount and proceeds, before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

We estimate that the total expenses of the offering, excluding underwriting discount, will be approximately $ and are payable by us. We have agreed to reimburse the underwriters for certain of their expenses in an amount up to $.

	Per Share	Total Without Option to Purchase Additional Shares Exercise	Total With Option to Purchase Additional Shares Exercise
Public offering price			
Underwriting discount			
Proceeds, before expenses, to us			

The underwriters propose to offer the shares of common stock to the public at the public offering price set forth on the cover of this prospectus. The underwriters may offer the shares of common stock to securities dealers at the public offering price less a concession not in excess of $ per share. If all of the shares are not sold at the public offering price, the underwriters may change the offering price and other selling terms.

Discretionary Accounts. The underwriters do not intend to confirm sales of the shares to any accounts over which they have discretionary authority.

Market Information. Prior to this offering, there has been no public market for shares of our common stock. The initial public offering price will be determined by negotiations between us and the representatives of the underwriters. In addition to prevailing market conditions, the factors to be considered in these negotiations will include:

- the history of, and prospects for, our company and the industry in which we compete;
- our past and present financial information;
- an assessment of our management; its past and present operations, and the prospects for, and timing of, our future revenue;
- the present state of our development;
- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

An active trading market for the shares may not develop. It is also possible that after the offering the shares will not trade in the public market at or above the initial public offering price.

We intend to apply to list our common stock on the Nasdaq Global Market under the symbol “XGN.”

Stabilization. In connection with this offering, the underwriters may engage in stabilizing transactions, overallotment transactions, syndicate covering transactions, penalty bids and purchases to cover positions created by short sales.

- Stabilizing transactions permit bids to purchase shares of common stock so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the common stock while the offering is in progress.
- Overallotment transactions involve sales by the underwriters of shares of common stock in excess of the number of shares the underwriters are obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that they may purchase in the option to purchase additional shares. In a naked short position, the number of shares involved is greater than the

number of shares in the option to purchase additional shares. The underwriters may close out any short position by exercising their option to purchase additional shares and/or purchasing shares in the open market.

- Syndicate covering transactions involve purchases of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared with the price at which they may purchase shares through exercise of the option to purchase additional shares. If the underwriters sell more shares than could be covered by exercise of the option to purchase additional shares and, therefore, have a naked short position, the position can be closed out only by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be downward pressure on the price of the shares in the open market that could adversely affect investors who purchase in the offering.
- Penalty bids permit the representatives to reclaim a selling concession from a syndicate member when the common stock originally sold by that syndicate member is purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on the Nasdaq Global Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Passive Market Making. In connection with this offering, underwriters and selling group members may engage in passive market making transactions in our common stock on the Nasdaq Global Market in accordance with Rule 103 of Regulation M under the Exchange Act during a period before the commencement of offers or sales of common stock and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, such bid must then be lowered when specified purchase limits are exceeded.

Lock-Up Agreements. Pursuant to certain "lock-up" agreements, we and our executive officers, directors and substantially all of our securityholders have agreed, subject to certain exceptions, not to offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of or announce the intention to otherwise dispose of, or enter into any swap, hedge or similar agreement or arrangement that transfers, in whole or in part, the economic consequence of ownership of, directly or indirectly, or make any demand or request or exercise any right with respect to the registration of, or file with the SEC a registration statement under the Securities Act relating to, any common stock or securities convertible into or exchangeable or exercisable for any common stock without the prior written consent of Cowen and Company, LLC, Cantor Fitzgerald & Co. and William Blair & Company, L.L.C., for a period of 180 days after the date of the pricing of the offering.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition. The lock-up provision will not restrict broker-dealers from engaging in market making and similar activities conducted in the ordinary course of their business.

Cowen and Company, LLC, Cantor Fitzgerald & Co. and William Blair & Company, L.L.C., in their sole discretion, may release our common stock and other securities subject to the lock-up agreements described above in whole or in part at any time. When determining whether or not to release our common stock and other securities from lock-up agreements, Cowen and Company, LLC, Cantor Fitzgerald & Co. and William Blair & Company, L.L.C. will consider, among other factors, the holder's reasons for requesting the release, the number of shares for which the release is being requested and market conditions at the time of the request. In the event of such a release or waiver for one of our directors or officers, Cowen and Company, LLC, Cantor Fitzgerald & Co. and William Blair & Company, L.L.C. shall provide us with notice of the impending release or waiver at least three business days before the effective date of such release or waiver and we will announce the impending release or waiver by issuing a press release at least two business days before the effective date of the release or waiver.

Electronic Offer, Sale and Distribution of Shares. A prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representatives may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Other Relationships. Certain of the underwriters and their affiliates have provided, and may in the future provide, various investment banking, commercial banking and other financial services for us and our affiliates for which they have received, and may in the future receive, customary fees.

Selling Restrictions.

Canada. The common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

European Economic Area. In relation to each Member State of the European Economic Area (each, a "Relevant Member State"), no offer of common stock may be made to the public in that Relevant Member State other than:

- to any legal entity which is a qualified investor, as defined in the European Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives; or
- in any other circumstances falling within Article 3(2) of the European Prospectus Directive,

provided that no such offer of shares shall require us or the representative(s) to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a "qualified investor" within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

We, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

This prospectus has been prepared on the basis that any offer of shares in any Relevant Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly any person making or intending to make an offer in that Relevant Member State of shares which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive in relation to such offer. Neither we nor the underwriters have authorized, nor do they authorize, the making of any offer of shares in circumstances in which an obligation arises for us or the underwriters to publish a prospectus for such offer.

For the purpose of the above provisions, the expression "an offer to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom. In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are

“qualified investors” (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order, and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as “relevant persons”).

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

France. This prospectus has not been prepared in the context of a public offering of financial securities in France within the meaning of Article L.411-1 of the French Code Monétaire et Financier and Title I of Book II of the Reglement Général of the Autorité des marchés financiers, or the AMF, and therefore has not been and will not be filed with the AMF for prior approval or submitted for clearance to the AMF. Consequently, the shares of our common stock may not be, directly or indirectly, offered or sold to the public in France and offers and sales of the shares of our common stock may only be made in France to qualified investors (investisseurs qualifiés) acting for their own, as defined in and in accordance with Articles L.411-2 and D.411-1 to D.411-4, D.734-1, D.744-1, D.754-1 and D.764-1 of the French Code Monétaire et Financier. Neither this prospectus nor any other offering material may be released, issued or distributed to the public in France or used in connection with any offer for subscription on sale of the shares of our common stock to the public in France. The subsequent direct or indirect retransfer of the shares of our common stock to the public in France may only be made in compliance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 through L.621-8-3 of the French Code Monétaire et Financier.

Germany. Each person who is in possession of this prospectus is aware of the fact that no German securities prospectus (wertpapierprospekt) within the meaning of the securities prospectus act (wertpapier-prospektgesetz), or the act, of the federal republic of Germany has been or will be published with respect to the shares of our common stock. In particular, each underwriter has represented that it has not engaged and has agreed that it will not engage in a public offering in the federal republic of Germany (ôffertliches angebot) within the meaning of the act with respect to any of the shares of our common stock otherwise than in accordance with the act and all other applicable legal and regulatory requirements.

Switzerland. The shares common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, us, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA (FINMA), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Netherlands. The offering of the shares of our common stock is not a public offering in The Netherlands. The shares of our common stock may not be offered or sold to individuals or legal entities in The Netherlands unless (i) a prospectus relating to the offer is available to the public, which has been approved by the Dutch Authority for the Financial Markets (Autoriteit Financiële Markten) or by the competent supervisory authority of another state that is a member of the European Union or party to the Agreement on the European Economic Area, as amended or (ii) an exception or exemption applies to the offer pursuant to Article 5:3 of The Netherlands Financial Supervision Act (Wet op het financieel toezicht) or Article 53 paragraph 2 or 3 of the Exemption Regulation of the Financial Supervision Act, for instance due to the offer targeting exclusively "qualified investors" (gekwalificeerde beleggers) within the meaning of Article 1:1 of The Netherlands Financial Supervision Act.

Japan. The shares have not been and will not be registered under the Financial Instruments and Exchange Act. Accordingly, the shares may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan.

Hong Kong. The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (i) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to our common stock has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to our common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Singapore. This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

- to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- where no consideration is or will be given for the transfer;
- where the transfer is by operation of law;
- as specified in Section 276(7) of the SFA; or
- as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Solely for the purposes of its obligations pursuant to Section 309B of the SFA, we have determined, and hereby notify all relevant persons (as defined in the CMP Regulations 2018), that the shares are "prescribed capital markets products" (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

We have not authorized and do not authorize the making of any offer of securities through any financial intermediary on our behalf, other than offers made by the underwriters and their respective affiliates, with a view to the final placement of the securities as contemplated in this document. Accordingly, no purchaser of the shares, other than the underwriters, is authorized to make any further offer of shares on our behalf or on behalf of the underwriters.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Latham & Watkins LLP, San Diego, California. The underwriters are being represented by Cooley LLP, San Diego, California.

EXPERTS

The financial statements as of December 31, 2018 and 2017 and for each of the two years in the period ended December 31, 2018 included in this prospectus and in the registration statement have been so included in reliance on the report of BDO USA, LLP, an independent registered public accounting firm (the report on the financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern) appearing elsewhere herein and in the registration statement, given on the authority of said firm as experts in auditing and accounting.

CHANGE IN INDEPENDENT ACCOUNTANT

On June 15, 2017, the Audit Committee of the board of directors determined to dismiss PricewaterhouseCoopers LLP, or PwC, and retain BDO USA, LLP, or BDO, as our independent registered public accounting firm. Effective July 14, 2017, we retained BDO as our independent registered public accounting firm.

The reports of PwC on our audited financial statements for each of the two fiscal years prior to its dismissal did not contain any adverse opinion or disclaimer of opinion, nor were such reports qualified or modified as to uncertainty, audit scope or accounting principles. However, the reports of PwC included an emphasis of matter regarding the Company's ability to continue as a going concern. We had no disagreements with PwC on any matter of accounting principles or practices, financial statement disclosure or auditing scope or procedure, which disagreements, if not resolved to its satisfaction, would have caused PwC to make reference in connection with its opinion to the subject matter of the disagreement during its audits for each of the two fiscal years prior to its dismissal or the subsequent interim period through June 15, 2017. During the two most recent fiscal years preceding PwC's dismissal, and the subsequent interim period through June 15, 2017, there were no "reportable events" as such term is defined in Item 304(a)(1)(v) of Regulation S-K.

During the two years ended December 31, 2016 and the subsequent interim period through July 14, 2017, neither we, nor anyone acting on our behalf, consulted with BDO on matters that involved the application of accounting principles to a specified transaction, either completed or proposed, the type of audit opinion that might be rendered on our audited financial statements, and neither a written report nor oral advice was provided to us by BDO that BDO concluded was an important factor considered by us in reaching a decision as to the accounting, auditing or financial reporting issue or any other matter that was the subject of a disagreement as that term is used in Item 304 (a)(1)(iv) of Regulation S-K and the related instructions to Item 304 of Regulation S-K or a reportable event as that term is used in Item 304(a)(1)(v) and the related instructions to Item 304 of Regulation S-K.

We have provided PwC with a copy of the foregoing disclosure and have requested that PwC furnish us with a letter addressed to the SEC stating whether or not PwC agrees with the above statements and, if not, stating the respects in which it does not agree. A copy of the letter from PwC is filed as an exhibit to the registration statement of which this prospectus is a part.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information about us and the common stock offered hereby, we refer you to the registration statement and the exhibits and schedules filed thereto. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. Upon the completion of this offering, we will be required to file periodic reports, proxy statements and other information with the SEC pursuant to the Exchange Act. You may read and copy this information at the Public Reference Room of the SEC, 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may obtain information on the operation of the public reference rooms by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements and other information about registrants, like us, that file electronically with the SEC. The address of that website is *www.sec.gov*.

Upon the completion of this offering, we will become subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, will file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above. We maintain a website at www.exagen.com. Upon the completion of this offering, you may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The reference to our website address does not constitute incorporation by reference of the information contained on our website, and you should not consider the contents of our website in making an investment decision with respect to our common stock.

EXAGEN INC.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Stockholders and the Board of Directors
Exagen Inc.
Vista, California

Opinion on the Financial Statements

We have audited the accompanying balance sheet of Exagen Inc. ("the Company") (formerly known as Exagen Diagnostics, Inc.) as of December 31, 2017, the related statements of operations, redeemable convertible preferred stock and stockholders' deficit, and cash flows for the year then ended, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017, and the results of its operations and its cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ BDO USA, LLP

We have served as the Company's auditor since 2017.

San Diego, California

February 1, 2019

Exagen Inc.

Balance Sheet
(in thousands, except share and per share data)

	December 31, 2017	December 31, 2017 Pro Forma (Unaudited)
Assets		
Current assets:		
Cash and cash equivalents	$ 11,241	
Accounts receivable, net	604	
Prepaid expenses and other current assets	1,415	
Total current assets	13,260	
Property and equipment, net	1,343	
Intangible assets, net	141	
Goodwill	5,506	
Other assets	140	
Total assets	$ 20,390	
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Deficit		
Current liabilities:		
Accounts payable	$ 1,772	
Accrued liabilities	3,218	
Total current liabilities	4,990	
Borrowings—non-current portion, net of discounts and debt issuance costs	18,809	
Redeemable convertible preferred stock warrant liabilities	896	
Deferred tax liabilities	214	
Other non-current liabilities	119	
Total liabilities	25,028	
Commitments and contingencies (Note 8)		
Redeemable convertible preferred stock, $0.001 par value—750,300,000 shares authorized at December 31, 2017; 497,691,757 shares issued and outstanding at December 31, 2017; $131,390 liquidation preference at December 31, 2017; no shares issued and outstanding, pro forma (unaudited)	92,046	
Stockholders' deficit:		
Common stock, $0.001 par value—1,470,000,000 shares authorized at December 31, 2017; 11,577,921 shares issued and outstanding at December 31, 2017; shares issued and outstanding, pro forma (unaudited)	12	
Additional paid-in capital	50,942	
Accumulated deficit	(147,638)	
Total stockholders' deficit	(96,684)	
Total liabilities, redeemable convertible preferred stock and stockholders' deficit	$ 20,390	

The accompanying notes are an integral part of these financial statements

Exagen Inc.

Statement of Operations
(in thousands, except share and per share data)

	Year Ended December 31, 2017
Revenue	$ 26,807
Operating expenses:	
Costs of revenue (excluding amortization of intangible assets)	14,137
Selling, general and administrative expenses	18,820
Research and development expenses	1,551
Amortization of intangible assets	186
Change in fair value of acquisition-related liabilities	(51)
Total operating expenses	34,643
Loss from operations	(7,836)
Interest expense	(2,948)
Loss on extinguishment of share purchase rights and 2013 Term Loan	(6,050)
Change in fair value of financial instruments	(9,391)
Other income, net	45
Loss before income taxes	(26,180)
Income tax benefit	549
Net loss	(25,631)
Accretion of redeemable convertible preferred stock	(5,353)
Deemed dividend recorded in connection with financing transactions	(1,790)
Net loss attributable to common stockholders (Note 2)	$ (32,774)
Net loss per share attributable to common stockholders, basic and diluted (Note 2)	$ (2.83)
Weighted-average number of shares used to compute net loss per share attributable to common stockholders, basic and diluted (Note 2)	11,577,921
Pro forma net loss per share attributable to common stockholders, basic and diluted (Note 2, unaudited)	$
Pro forma weighted-average number of shares used to compute net loss per share attributable to common stockholders, basic and diluted (Note 2, unaudited)	

The accompanying notes are an integral part of these financial statements

Exagen Inc.

Statement of Cash Flow
(in thousands)

	Year Ended December 31, 2017
Cash flows from operating activities:	
Net loss	$ (25,631)
Adjustments to reconcile net loss to net cash used in operating activities:	
Revaluation of acquisition-related liabilities	(51)
Depreciation and amortization	670
Amortization of debt discount and debt issuance costs	498
Non-cash interest expense	502
Revaluation of embedded derivatives, share purchase rights, and warrant liabilities	9,391
Loss on extinguishment of share purchase rights	5,744
Loss on extinguishment of 2013 Term Loan	306
Deferred income taxes	(554)
Loss on disposal of assets	(14)
Stock-based compensation	187
Changes in assets and liabilities:	
Accounts receivable, net	(198)
Prepaid expenses and other current assets	178
Accounts payable	44
Accrued liabilities	254
Other assets	4
Repayment of accrued PIK interest in conjunction with repayment of 2013 Term Loan	(2,298)
Net cash used in operating activities	(10,968)
Cash flows from investing activities:	
Purchases of property and equipment	(567)
Proceeds from sale of property and equipment	57
Net cash used in investing activities	(510)
Cash flows from financing activities:	
Principal payment on capital lease obligations	(22)
Proceeds from the issuance of preferred stock purchase rights, net of issuance costs	3,763
Proceeds from issuance of 2017 Term Loan, net of issuance costs of $465	19,535
Repayment of 2013 Term Loan	(15,000)
Proceeds from the issuance of preferred stock, net of issuance costs	10,880
Net cash provided by financing activities	19,156
Net change in cash and cash equivalents	7,678
Cash and cash equivalents, beginning of period	3,563
Cash and cash equivalents, end of period	$ 11,241
Supplemental disclosure of cash flow information:	
Cash paid for interest expense	$ 1,989
Supplemental disclosure of non-cash items:	
Accretion to redemption value of redeemable convertible preferred stock	$ 5,353
Equipment purchased under capital lease obligations	$ 108
Fair value of warrant liabilities recorded as discount on debt	$ 1,000
Costs incurred, but not paid, in connection with capital expenditures	$ 8
Fair value of financial instruments extinguished in connection with financing transactions (Note 10)	$ 19,508
Fair value of tranche participation rights recognized in connection with financing transactions (Note 10)	$ 2,308
Beneficial conversion feature recognized in connection with financing transactions (Note 10)	$ 485
Deemed dividend recorded in connection with financing transactions (Note 10)	$ 1,790

The accompanying notes are an integral part of these financial statements

Exagen Inc.

Statement of Redeemable Convertible Preferred Stock and Stockholders' Deficit
Year Ended December 31, 2017
(in thousands)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balances at December 31, 2016	193,121	$49,717	11,578	$ 12	$ 57,413	$ (122,007)	$ (64,582)
Accretion of redeemable convertible preferred stock	–	5,353	–	–	(5,353)	–	(5,353)
Stock-based compensation	–	–	–	–	187	–	187
Beneficial conversion feature	–	(485)	–	–	485	–	485
Issuance of Series F redeemable convertible preferred stock for aggregate proceeds of $0.078 per share, net of issuance costs of $81, in the first tranche closing of the Series F financing (Note 10)	48,077	6,009	–	–	–	–	–
Issuance of Series F redeemable convertible preferred stock upon the conversion of outstanding stock purchase rights in the first tranche closing of the Series F financing (Note 10)	163,785	20,637	–	–	–	–	–
Issuance of Series F redeemable convertible preferred stock for aggregate proceeds of $0.078 per share, net of issuance costs of $10, upon the exercise of the tranche participation rights in the second tranche closing of the Series F financing (Note 10)	38,462	4,804	–	–	–	–	–
Issuance of Series F redeemable convertible preferred stock for aggregate proceeds of $0.078 per share, net of issuance costs of $10, in the third tranche closing of the Series F financing (Note 10)	54,247	6,011	–	–	(1,790)	–	(1,790)
Net loss	–	–			–	(25,631)	(25,631)
Balances at December 31, 2017	497,692	$92,046	11,578	$ 12	$ 50,942	$ (147,638)	$ (96,684)

The accompanying notes are an integral part of these financial statements

Exagen Inc.

Notes to Financial Statements

Note 1. Organization

Description of Business

Exagen Inc. (the Company) was incorporated under the laws of the state of New Mexico in 2002, under the name Exagen Corporation. In 2003, Exagen Corporation changed its state of incorporation from New Mexico to Delaware by merging with and into Exagen Diagnostics, Inc., pursuant to which the Company changed its name to Exagen Diagnostics, Inc. In January 2019, the Company changed its name to Exagen Inc. The Company is dedicated to transforming the care continuum for patients suffering from debilitating and chronic autoimmune diseases by enabling timely differential diagnosis and optimizing therapeutic intervention.

Liquidity and Going Concern

The Company has suffered recurring losses from operations and negative cash flows from operating activities since inception. The Company anticipates that it will continue to incur net losses into the foreseeable future. At December 31, 2017, the Company had cash and cash equivalents of $11.2 million and had an accumulated deficit of $147.6 million. Based on the Company's current business plan, management believes that existing cash and cash equivalents will be sufficient to fund the Company's obligations into the second half of 2019. The Company's ability to execute its operating plan beyond mid-2019 depends on its ability to obtain additional funding through equity offerings, debt financings or other strategic transactions. The accompanying financial statements have been prepared assuming the Company will continue as a going concern, which contemplates the realization of assets and settlement of liabilities in the normal course of business. However, the Company's current working capital, anticipated operating expenses and net losses and the uncertainties surrounding its ability to raise additional capital as needed, as discussed below, raise substantial doubt about its ability to continue as a going concern for a period of one year following the date that these financial statements are issued. The financial statements do not include any adjustments for the recovery and classification of assets or the amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

To execute its business plans, the Company will need additional funding to support its continuing operations and pursue its growth strategy. Until such time as the Company can achieve significant cash flows from operations, if ever, it expects to finance its operations through the sale of its stock, debt financings or other strategic transactions. Although the Company has been successful in raising capital in the past, there is no assurance that it will be successful in obtaining such additional financing on terms acceptable to the Company, if at all. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders. If the Company is unable to obtain funding, the Company could be forced to delay, reduce or eliminate some or all of its programs, product portfolio expansion plans or commercialization efforts, which could have a material adverse effect on the Company's business, operating results and financial condition and the Company's ability to achieve its intended business objectives.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation and Use of Estimates

The Company's financial statements are prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The preparation of the accompanying financial statements requires management to make estimates and assumptions that affect the reported

amounts of assets and liabilities, the disclosure of contingent assets and liabilities as of the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could materially differ from those estimates.

Significant estimates and assumptions made in the accompanying financial statements include, but are not limited to revenue recognition, the fair value of the Company's common and redeemable convertible preferred stock, the fair value of financial instruments measured at fair value, the recoverability of its long-lived assets (including goodwill) and net deferred tax assets (and related valuation allowance). The Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could materially differ from those estimates.

Unaudited Pro Forma Information

The unaudited pro forma balance sheet information as of December 31, 2017 assumes (i) the conversion of all outstanding shares of redeemable convertible preferred stock into shares of the Company's common stock and the related reclassification of (a) the carrying value of the redeemable convertible preferred stock to permanent equity and (b) the redeemable convertible preferred stock warrant liabilities to additional paid-in-capital, a component of stockholders' equity (deficit), each of which will occur immediately prior to the completion of the Company's planned Initial Public Offering (IPO) and (ii) the net exercise of warrants to purchase shares of our common stock. Shares of common stock issued in the IPO and any related net proceeds are excluded from the pro forma information**.**

Concentration of Credit Risk and Other Risk and Uncertainties

Financial instruments that potentially subject the Company to credit risk consist principally of cash, cash equivalents, and accounts receivable. Substantially all the Company's cash and cash equivalents are held at one financial institution that management believes is of high credit quality. Such deposits may, at times, exceed federally insured limits.

For the year ended December 31, 2017, approximately 30% of the Company's revenue is derived from sales billed to Medicare and 89% of the Company's revenue was related to the AVISE® CTD test.

The Company is dependent on key suppliers for certain laboratory materials. An interruption in the supply of these materials would temporarily impact the Company's ability to perform testing services.

Fair Value Measurements

The carrying value of the Company's cash and cash equivalents, prepaid expenses and other current assets, other assets, accounts payable, and accrued liabilities approximate fair value due to the short-term nature of these items. Based on the borrowing rates currently available to the Company for debt with similar terms and consideration of default and credit risk, the carrying value of the Company's long term borrowings approximates its fair value, which is considered a Level 2 input.

Fair value is defined as the exchange price that would be received for an asset or an exit price paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs.

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The fair value hierarchy defines a three-level valuation hierarchy for disclosure of fair value measurements as follows:

Level 1— Unadjusted quoted prices in active markets for identical assets or liabilities;

Level 2— Inputs other than quoted prices included within Level I that are observable, unadjusted quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities; and

Level 3— Unobservable inputs that are supported by little or no market activity for the related assets or liabilities.

The categorization of a financial instrument within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

The Company's acquisition-related liabilities, share purchase rights, tranche participation rights, and redeemable convertible preferred stock warrant liabilities are measured at fair value on a recurring basis and are classified as Level 3 liabilities. The Company records subsequent adjustments to reflect the increase or decrease in estimated fair value at each reporting date in current period earnings.

Cash, Cash Equivalents and Restricted Cash

The Company considers all highly-liquid investments purchased with a remaining maturity date upon acquisition of three months or less to be cash equivalents and are stated at cost, which approximates fair value.

In 2016, the Company entered into an arrangement with a financial institution with which it has an existing banking relationship whereby in exchange for the issuance of corporate credit cards, the Company agreed to obtain a $100,000 certificate of deposit with this financial institution as collateral for the balances borrowed on these credit cards. The Company has classified the value of this certificate of deposit (including all interest earned thereon) within Other assets in the accompanying balance sheet. The Company has the right terminate the credit card program at any time. Upon termination of the credit card program and repayment of all outstanding balances owed, the Company may redeem the certificate of deposit (and all interest earned thereon).

Accounts Receivable

Accounts receivable are recorded net of estimated contractual allowances on an accrual basis for tests billed to Medicare (revenue recognition is discussed below). The Company also records an allowance for doubtful accounts for the estimate of amounts that will not be collected using a method that considers its history of collections from Medicare. Once a receivable is deemed to be uncollectible, such balance is charged against the allowance for doubtful accounts. At December 31, 2017, the Company's allowance for doubtful accounts was $48,000. Total bad debt expense recorded in the year ended December 31, 2017 was $34,000. Changes to the Company's original estimated contractual allowances are recorded in the period they become known as an adjustment to net revenue.

Property and Equipment

Property and equipment are recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, generally between three and five years.

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Leasehold improvements are amortized on a straight-line basis over the lesser of their useful life or the remaining term of the lease. Maintenance and repairs are charged to expense as incurred, and improvements and betterments are capitalized. When assets are retired or otherwise disposed of, the cost and accumulated depreciation are removed from the balance sheet and any resulting gain or loss is reflected in operations in the period realized.

Long Lived Assets

The Company's long-lived assets are comprised principally of its property and equipment, finite lived intangible assets, and goodwill.

If the Company identifies a change in the circumstances related to its long-lived assets, such as property and equipment and intangible assets (other than goodwill), that indicates the carrying value of any such asset may not be recoverable, the Company will perform an impairment analysis. A long-lived asset (other than goodwill) is deemed to be impaired when the undiscounted cash flows expected to be generated by the asset (or asset group) are less than the asset's carrying amount. Any required impairment loss would be measured as the amount by which the asset's carrying value exceeds its fair value, and would be recorded as a reduction in the carrying value of the related asset and a charge to operating expense.

Goodwill is reviewed for impairment annually (during the fourth quarter) or more frequently if indicators of impairment exist. As the Company operates in a single operating segment and reporting unit, the Company first assesses qualitative factors to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the two-step goodwill impairment test. If, after assessing qualitative factors, the Company determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the two-step impairment test is unnecessary. If deemed necessary, a two-step test is used to identify the potential impairment and to measure the amount of goodwill impairment, if any. The first step is to compare the fair value of the reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, goodwill is considered not impaired; otherwise, there is an indication that goodwill may be impaired and the amount of the loss, if any, is measured by performing step two. Under step two, the impairment loss, if any, is measured by comparing the implied fair value of the reporting unit goodwill with the carrying amount of goodwill. There was no indication of impairment of goodwill for the period presented.

Clinical Studies

From time to time, the Company engages in efforts to scientifically measure and document the application and efficacy of its various testing products. These arrangements typically require the Company to pay a fee to a third-party scientific investigator (usually a physician or research institution) for each subject enrolled in a clinical study, and the Company accrues expenses associated with these efforts as subjects are enrolled in each study. Expenses associated with clinical study activities are recorded in research and development expenses in the accompanying statement of operations.

Redeemable Convertible Preferred Stock

The Company has multiple classes of redeemable convertible preferred stock, all of which are classified as temporary equity in the balance sheet. Shares of Series A-3 redeemable convertible preferred stock have been classified as temporary equity in the balance sheet as holders of the Series A-3 redeemable convertible preferred stock can cause the redemption of the shares upon certain

events such as a change in control or a significant a transfer of Company assets to a third party, which are outside of the Company's control.

Shares of Series B-3, Series C, Series D, Series E, and Series F redeemable convertible preferred stock are redeemable at any time after May 10th, 2022, upon the written request of the holders of 52% of the outstanding shares of these issuances, voting together as a single class. Redeemable convertible preferred stock which is redeemable on or after a certain date at the option of the holder is accreted to its redemption value from the date of issuance to the earliest redemption date.

Redeemable Convertible Preferred Stock Warrants

The Company accounts for its redeemable convertible preferred stock warrants as liabilities based upon the characteristics and provisions of each instrument. The redeemable convertible preferred stock warrants classified as liabilities are recorded on the Company's balance sheets at their fair value on the date of issuance and are revalued on each subsequent balance sheet, with fair value changes recognized as increases or reductions in the statement of operations. The Company adjusts the liability for changes in fair value of these redeemable convertible preferred stock warrants until the earlier of: (i) exercise of warrants; (ii) expiration of redeemable convertible preferred stock warrants; (iii) a change of control of the Company; or (iv) the consummation of the Company's IPO. At that time, the redeemable convertible preferred stock warrant liabilities will be adjusted to fair value in the statement of operations with the final fair value reclassified to additional paid-in capital.

Revenue Recognition

The Company derives its revenue from sales of its testing products. The Company primarily markets its testing products to rheumatologists and their physician assistants in the United States. The healthcare professionals who order the Company's testing products and to whom test results are reported are generally not responsible for payment for these products. The parties that pay for these services (the Payers) consist of commercial third-party companies, Medicare and other government payers, and patients. The Company recognizes revenue when the following criteria have been met: (i) persuasive evidence of an arrangement exists; (ii) delivery has occurred or services have been rendered; (iii) the fee is fixed or determinable; and (iv) collectability is reasonably assured.

The Company's service is completed upon the delivery of test results to the prescribing physician which triggers billing for the service. The Company recognizes revenue related to billings to Payers on an accrual basis, net of contractual adjustments, only when the Company has established pricing with its Payers as indicated by contractual pricing arrangements or when it is able to demonstrate that a predictable pattern of payment for its services exists. For the year ended December 31, 2017, revenue was recognized on an accrual basis for one payer, Medicare, and totaled $8.2 million.

In the absence of a predictable pattern of reimbursement or a contract with a Payer, revenue is recognized upon cash receipt. The assessment of the fixed or determinable nature of the fees charged and the collectability of those fees requires significant judgment by management. Accordingly, the Company expects to recognize revenue upon cash receipt until it has contractual pricing arrangements with Payers or sufficient history to reliably estimate payment patterns.

Research and Development

Costs associated with research and development activities are expensed as incurred and include, but are not limited to, personnel—expenses, including stock-based compensation expense, materials,

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laboratory supplies, consulting costs, costs associated with setting up and conducting clinical studies and allocated overhead including rent and utilities.

Advertising and Marketing Costs

Costs associated with advertising and marketing activities are expensed as incurred. Total advertising and marketing costs were approximately $1.3 million for the year ended December 31, 2017 and are included in selling, general & administrative expenses in the accompanying statement of operations.

Shipping and Handling Costs

Costs incurred for shipping and handling are included in costs of revenue in the accompanying statement of operations and totaled approximately $1.1 million for the year ended December 31, 2017.

Stock-Based Compensation

The Company recognizes compensation expense for all stock-based awards to employees and directors based on the grant-date estimated fair values over the requisite service period of the awards (usually the vesting period) on a straight-line basis. The fair value of stock options is determined using the Black-Scholes-Merton (BSM) option pricing model, which requires management to make certain assumptions regarding a number of complex and subjective variables.

The BSM option pricing model incorporates various estimates, including the fair value of the Company's common stock, expected volatility, expected term and risk-free interest rates. The weighted-average expected term of options was calculated using the simplified method. This decision was based on the lack of relevant historical data due to the Company's limited historical experience. In addition, due to the Company's limited historical data, the estimated volatility incorporates the historical volatility over the expected term of the award of comparable companies whose share prices are publicly available. The risk-free interest rate for periods within the contractual term of the option is based on the U.S. Treasury yield in effect at the time of grant. The dividend yield was zero, as the Company has never declared or paid dividends and has no plans to do so in the foreseeable future.

Prior to the adoption of Accounting Standards Update (ASU) 2016-09, *Improvements to Employee Share-Based Payment Accounting*, on January 1, 2017, stock-based compensation expense was recognized only for those awards that are ultimately expected to vest, and the Company estimated forfeitures based on an analysis of historical employee turnover. Upon the adoption of ASU 2016-09, the Company elected to recognize the impact of forfeitures as they occur. In adopting this standard, the Company utilized a modified retrospective approach in which a cumulative adjustment was recorded to retained earnings for the difference between the amount of compensation cost recorded prior to adoption (inclusive of estimated forfeitures) and the amount that would have been recorded without assuming forfeitures. The impact of the adoption of this standard was immaterial to the financial statements.

Due to the absence of a public market for the Company's common stock, it has been necessary to estimate the fair value of the common stock underlying the Company's stock-based awards when performing fair value calculations using the BSM option pricing model. The fair value of the common stock underlying the Company's stock-based awards was assessed on each grant date by the Company's board of directors (Board of Directors). All options to purchase shares of the Company's common stock have been granted with an exercise price per share no less than the fair value per share of the Company's common stock underlying those options on the date of grant.

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Comprehensive Loss

Comprehensive loss is defined as a change in equity of a business enterprise during a period, resulting from transactions from nonowner sources. There have been no items qualifying as other comprehensive loss and, therefore, for all periods presented, the Company's comprehensive loss was the same as its reported net loss.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of the differences between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company recognizes net deferred tax assets to the extent that the Company believes these assets are more likely than not to be realized. In making such a determination, management considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If management determines that the Company would be able to realize its deferred tax assets in the future in excess of their net recorded amount, management would adjust the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company records uncertain tax positions on the basis of a two-step process whereby (i) management determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (ii) for those tax positions that meet the more-likely-than-not recognition threshold, management recognizes the largest amount of tax benefit that is more than 50% likely to be realized upon ultimate settlement with the related tax authority. The Company recognizes interest and penalties related to unrecognized tax benefits within income tax expense. Any accrued interest and penalties are included within the related tax liability.

Net Loss Per Share

Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted net loss per share attributable to common stockholders is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common stock equivalents outstanding for the period determined using the treasury-stock and if-converted methods. Potentially dilutive common stock equivalents are comprised of redeemable convertible preferred stock, warrants for the purchase of redeemable convertible preferred and common stock and options outstanding under the Company's stock option plan. For the year ended December 31, 2017, there is no difference in the number of shares used to calculate basic and diluted shares outstanding as the inclusion of the potentially dilutive securities would be antidilutive.

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The following table summarizes the Company's net loss per share (in thousands, except share and per share data):

Numerator	
Net loss	$ (25,631)
Accretion of redeemable convertible preferred stock	(5,353)
Deemed dividend recorded in connection with financing transactions	(1,790)
Net loss attributable to common stockholders	$ (32,774)
Denominator	
Weighted-average common shares outstanding, basic and diluted	11,577,921
Net loss per share attributable to common stockholders, basic and diluted	$ (2.83)

Potentially dilutive securities not included in the calculation of diluted net loss per share because to do so would be anti-dilutive are as follows (in common stock equivalent shares):

Redeemable convertible preferred stock	920,529,726
Warrants to purchase redeemable convertible preferred stock	37,380,163
Warrants to purchase common stock	171,695,348
Common stock options	12,762,357
Total	1,142,367,594

Unaudited Pro Forma Net Loss Per Share

The following table summarizes the Company's unaudited pro forma net loss per share (in thousands, except share and per share data):

Numerator	
Net loss attributable to common stockholders	$
Add:	
Change in fair value of preferred stock warrant liabilities, share purchase rights and tranche participation rights	
Accretion of redeemable convertible preferred stock	
Deemed dividend recorded in connection with financing transactions	
Pro forma net loss attributable to common stockholders	
	$
Denominator	
Weighted-average common shares outstanding, basic and diluted	
Pro forma adjustments to reflect assumed conversion of redeemable convertible preferred stock	
Pro forma adjustments to reflect assumed conversion of	
Shares used to compute pro forma net loss per share, basic and diluted	
Pro forma net loss per share attributable to common stockholders, basic and diluted	

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Segment Reporting

The Company has one operating segment. Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker in making decisions regarding resource allocation and assessing performance.

Recent Accounting Pronouncements Not Yet Adopted

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (FASB), or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective will not have a material impact on the Company's financial position or results of operations upon adoption.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers*, which, along with subsequent amendments and addenda to this standard, provides a five-step analysis of transactions to determine when and how revenue is recognized. The core principle is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This ASU is effective for annual periods beginning after December 15, 2017 for public companies and annual periods beginning after December 15, 2018 for private companies and shall be applied retrospectively to each period presented or as a cumulative-effect adjustment as of the date of adoption. The FASB has issued subsequent guidance related to specific implementation issues for ASU 2014-09. In conjunction with the adoption of ASU 2014-09, the Company will concurrently adopt this additional accounting guidance. The Company plans to adopt this standard on January 1, 2018 and while the Company is finalizing its analysis, this ASU will result in an acceleration of revenue recognition since the Company will be required to estimate consideration to which it expects to be entitled, subject to constraint, rather than record revenue on a cash basis. Upon adoption, the Company will record a cumulative-effect adjustment to the opening balance of retained earnings.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The new topic supersedes Topic 840, Leases, and increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and requires disclosures of key information about leasing arrangements. In July 2018, the FASB issued ASU 2018-10, *Codification Improvements to Topic 842*, which provides narrow amendments to clarify how to apply certain aspects of the new lease standard, and ASU 2018-11, *Leases: Targeted Improvements*, which was issued to provide relief to companies from restating comparative periods. Pursuant to this ASU, in the period of adoption the Company will not restate comparative periods presented in its financial statements. The effective date of this guidance for public companies is for reporting periods beginning after December 15, 2018, and periods beginning after December 15, 2019 for private companies. ASU 2016-02 mandates a modified retrospective transition method. The Company is currently evaluating the impact of ASU 2016-02 on its financial statements.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash.* The amendments in this update require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash

flows. The Company will adopt this guidance for its fiscal year beginning January 1, 2018. The Company's restricted cash balances consist of a federally insured certificate of deposit held with an affiliate of a large publicly traded financial institution that secures the Company's corporate borrowing program. Due to the duration of this certificate of deposit, the amounts restricted as to use have been classified outside of cash and cash equivalents. As a result, adoption of this standard is not expected to have a material impact on its financial statements.

In January 2017, the FASB issued ASU 2017-04, *Simplifying the Test for Goodwill Impairment*. This guidance is intended to simplify the accounting for goodwill impairment for all entities by requiring impairment charges to be based on the first step in today's two-step impairment test under the guidance contained in ASC 350. Specifically, this guidance eliminates the requirement to calculate the implied fair value of goodwill to measure a goodwill impairment charge. Instead, entities will record an impairment charge based on the excess of a reporting unit's carrying amount over its fair value. The Company intends to adopt this guidance on January 1, 2018, and does not expect the adoption of this guidance to have a material impact on its financial statements.

Recently Adopted Accounting Standards

In August 2014, the FASB issued ASU 2014-15, *Presentation of Financial Statements—Going Concern*, which defines management's responsibility to evaluate whether there is substantial doubt about an organization's ability to continue as a going concern and to provide related footnote disclosures. The new standard provides management with principles to evaluate whether substantial doubt exists by (i) providing a definition of substantial doubt, (ii) requiring an evaluation every annual and interim reporting period, and (iii) providing principles for considering the mitigating effects of management's plans. If substantial doubt is identified, the ASU requires that an organization provide enhanced disclosures about (1) principal conditions or events that raise substantial doubt, (2) management's evaluation of the significance of these events in relation to its ability to meet obligations, and (3) management's plans that are either intended to mitigate the conditions that raise substantial doubt, or alleviate substantial doubt. The Company adopted this ASU on January 1, 2017.

In March 2016, the FASB issued ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting.* This ASU includes provisions intended to simplify how share-based payments are accounted for and presented in the financial statements. Under this guidance, the tax effects of share-based payments are recorded through the statement of operation, and will be accounted for as discrete items when they occur. Further, the Company may make a onetime election to either estimate forfeitures each period or account for future forfeitures related to service conditions in its share-based payment arrangements as they occur. The Company adopted this guidance for its fiscal year beginning January 1, 2017 and has elected to account for future forfeitures as they occur. In adopting this standard, the Company utilized a modified retrospective approach in which a cumulative adjustment was recorded to retained earnings for the difference between the amount of compensation cost recorded prior to adoption (inclusive of estimated forfeitures) and the amount that would have been recorded without assuming forfeitures. The impact of the adoption of this standard was immaterial on the accompanying financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments.* This ASU intends to clarify how certain cash receipts and cash payments are presented and classified in the statements of cash flows. The amendments in this update provide guidance on eight specific cash flow issues. The Company adopted this guidance for its fiscal year beginning January 1, 2017 and the impact of the adoption of this standard was immaterial on the accompanying financial statements.

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Note 3. Other Financial Information

Prepaid Expenses and Other Current Assets

At December 31, 2017, prepaid expenses and other current assets consist of the following (in thousands):

Diagnostic testing supplies	$ 871
Prepaid product royalties	194
Prepaid maintenance and insurance contracts	334
Other prepaid assets	16
Prepaid and other current assets	$1,415

Property and Equipment

At December 31, 2017, property and equipment consist of the following (in thousands):

Furniture and fixtures	$ 29
Laboratory equipment	1,538
Computer equipment	1,464
Leasehold improvements	367
Construction in progress	125
Total property and equipment	3,523
Less: accumulated depreciation and amortization	(2,180)
Property and equipment, net	$ 1,343

Depreciation and amortization expense for the year ended December 31, 2017 was approximately $484,000. At December 31, 2017, the gross book value of assets under capital lease was $108,000, and is classified in Laboratory equipment in the table above.

Accrued Liabilities

At December 31, 2017, accrued liabilities consist of the following (in thousands):

Accrued payroll and related expenses	$1,974
Accrued interest	145
Accrued purchases of goods and services	252
Accrued royalties	552
Accrued clinical study activity	114
Capital lease obligations, current portion	27
Other accrued liabilities	154
Accrued liabilities	$3,218

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Note 4. Goodwill and Intangible Assets

The following table provides information about goodwill and intangible asset balances at December 31, 2017 (dollars in thousands):

	Weighted-Average Amortization Period	Gross Amount	Accumulated Amortization	Net Book Value
Intangible assets subject to amortization:				
Purchased technologies	8 years	$1,120	$ (1,015)	$ 105
Trade name and trademarks	8 years	370	(334)	36
		$1,490	$ (1,349)	$ 141
Intangible assets not subject to amortization:				
Goodwill				$ 5,506

Total expense related to the amortization of intangible assets was approximately $186,000 for the year ended December 31, 2017.

Total future amortization expense of $141,000 related to intangible assets subject to amortization will be recognized in the year ended December 31, 2018.

Note 5. Share Purchase Rights

During 2016 and 2017, the Company entered into a series of agreements with existing holders of its redeemable convertible preferred stock to raise the following amounts in each respective period through this issuance of the following similar financial instruments (in thousands):

Agreement Date	
June 2016	$2,089
August 2016	1,000
October 2016	996
November 2016	996
December 2016	996
January 2017	996
February 2017	1,452
April 2017	1,315
Total proceeds	$9,840

Each tranche of these share purchase rights had an initial maturity date set at six months from the date of issuance (e.g. the June 2016 share purchase rights were set to mature in December 2016). In December of 2016, the holders of these financial instruments agreed to extend the maturity date of the June 2016 instruments until June 2017. In March of 2017, the holders of these financial instruments agreed to extend the maturity date of the August 2016 purchase rights and the October 2016 purchase rights until December 2017. Upon the maturity of each of these instruments, the notional amount of each instrument, plus all accrued interest, was set to convert into shares of Series E redeemable convertible preferred stock at a rate of $0.25 per share. The notional amount of each instrument accrued interest at an annual rate equal to 8%.

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Each of these instruments contained a number of additional settlement features which were exercisable by the investors upon the occurrence of certain events: (i) Upon the occurrence of an IPO or subsequent issuance of preferred stock whose aggregate proceeds exceed $10,000,000, all instruments issued prior to December 2016 would convert into shares of common or preferred stock (as applicable to the class of shares issued) at an 80% discount to the issuance price of those shares. The instruments issued in February and April of 2017 did not provide for such a discount upon the issuance of preferred stock, but did provide for an 80% discount upon the occurrence of an IPO; (ii) Upon an event which results in the conversion of the outstanding shares of Series E redeemable convertible preferred stock to shares of common stock, or upon the election by the holders of these notes, these instruments would convert into shares of Series E redeemable convertible preferred stock at a rate of $0.25 per share; (iii) Upon a change of control of the Company, and with the consent of the Company's senior lenders, these instruments would be redeemed for 120% (200% for the instruments issued in February and April of 2017) of the principal and accrued interest of these instruments. If the consent of the senior lenders is not received in conjunction with a change in control of the Company, these instruments were to convert into shares of Series E redeemable convertible preferred stock at a rate of $0.25 per share; (iv) Upon a liquidation of the Company, and with the consent of the Company's senior lenders, these instruments were to be redeemed for 100% of the principal and accrued interest of these instruments. If the consent of the senior lenders was not received in conjunction with a liquidation of the Company, these instruments were set to convert into shares of Series E redeemable convertible preferred stock at a rate of $0.25 per share.

Based on an evaluation of the terms of these instruments, the Company concluded each of these instruments represented a single freestanding financial instrument providing each investor the ability to purchase shares of Series E redeemable convertible preferred stock at $0.25 per share upon maturity, and which contain a number of additional settlement features which were exercisable based on the occurrence of events outside of each investor's control. As a result of the contingent redemption features present in the Series E redeemable convertible preferred stock (Note 10), the Company concluded these instruments require classification as liabilities whose fair value will be marked-to-market each reporting period. The Company valued these instruments using a method that considered the expected fair value of each of the potential settlement alternatives available to the investors. The application of this method incorporated management's assumptions related to the likelihood and timing of events which give rise to each settlement alternative available to the investors under the terms of these instruments. The significant assumptions used in the valuation of these instruments include (i) Management's assumptions related to likelihood and timing of occurrence for each settlement feature and (ii) the fair value of the consideration that would be received upon the exercise of each settlement feature.

The following table summarizes the ranges for the significant assumptions utilized in management's estimates for the year ended December 31, 2017:

Estimated per share fair value of preferred stock	$0.11 - $0.13
Assessed likelihood of settlement into preferred shares of preferred stock	65% - 100%
Expected time to settlement event	0.1 years - 0.5 years

In May 2017, as a result of the Series F financing transaction (Note 10), all outstanding share purchase rights were converted into 163,785,334 shares of Series F redeemable convertible preferred stock in accordance with the settlement terms described above and as amended to allow a 20% discount to the per share issuance price for the share purchase rights issued in February 2017 and

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April 2017. Based on the estimated fair value and number of Series F redeemable convertible preferred stock issued based on the settlement terms, the fair value of the outstanding share purchase rights was estimated at $19.5 million, which resulted in expense of $10.1 million representing the change in the fair value of these financial instruments upon settlement.

Note 6. Borrowings

2017 Term Loan

In September 2017, the Company executed a term loan agreement (the 2017 Term Loan) with Innovatus Life Sciences Lending Fund I, LP (Innovatus) and borrowed $20.0 million, $17.8 million of which was immediately used to repay the Company's existing loan with Capital Royalty Partners II L.P. and its affiliates. On December 7, 2018, the Company borrowed an additional $5.0 million under the 2017 Term Loan. At December 7, 2018, no additional amounts remain available to borrow under the 2017 Term Loan.

The interest rate on all borrowings under the 2017 Term Loan is 11.0%, of which 2.5% is paid in-kind in the form of additional term loans, or PIK Loans, until September of 2019, after which interest accrues at an annual rate of 11.0%. The Company has estimated the effective interest rate of this loan to be approximately 14%. Accrued interest is due and payable monthly, unless the Company elects to pay PIK interest. The outstanding principal and accrued interest on the 2017 Term Loan will be repaid in twenty-four equal monthly installments commencing in October 2020. Upon repayment of the final installment under the 2017 Term Loan, the Company is required to pay an additional fee of $800,000. This obligation is being accreted into interest expense over the term of 2017 Term Loan using the effective interest method. For the year ended December 31, 2017, the Company issued PIK Loans totaling $159,000.

If the 2017 Term Loan is repaid prior to the September 7, 2019, the Company will be required to issue Innovatus a warrant to purchase 3,000,000 shares of Series F redeemable convertible preferred stock at an exercise price of $0.078 per share, and pay an additional prepayment premium which ranges between 25% and 2.5% of the outstanding term loan principal. If the 2017 Term Loan is prepaid after September 7, 2019, but before September 7, 2020, the 2017 Term Loan requires a prepayment premium of 3% of the aggregate outstanding principal. The prepayment premium decreases by 1% during each subsequent twelve-month period after September 7, 2020.

The 2017 Term Loan is collateralized by a first priority security interest on substantially all of the Company's assets, including intellectual property. The affirmative covenants of the 2017 Term Loan require that the Company timely file taxes, maintain good standing and government compliance, maintain liability and other insurance, provide prompt notification of significant corporate events, and furnish audited financial statements within 150 days of fiscal year end without qualification as to the scope of the audit or as to going concern and without any other similar qualification. The Company met this affirmative covenant upon issuance of its generally accepted auditing standards opinion in April 2018.

The affirmative covenants require that the Company achieve a specified level of revenue, and either (i) gross margins, or (ii) gross profits (collectively referred to as the Interest Only Milestones), as measured quarterly on a rolling twelve month basis and commencing with the quarter ending December 31, 2017 (1) the interest rate on the 2017 Term Loan will increase by 8% and (2) repayment will commence on the date it is determined the Interest Only Milestones have not been met and over

the following eighteen months in equal monthly installments. The consequences of failing to achieve the Interest Only Milestones will be waived if, within sixty days of failing to achieve the Interest Only Milestones, the Company issues additional equity securities or subordinated debt with net proceeds of at least $9.5 million. In addition, the 2017 Term Loan requires that the Company maintain certain levels of minimum liquidity. If the Company has achieved the Interest Only Milestones, the Company is required to maintain an unrestricted cash balance of $3,000,000 prior to June 18, 2018 and $2,000,000 afterwards. If the Interest Only Milestones are not met, the Company must maintain unrestricted cash balances totaling at least the trailing four months cash used to fund operating activities.

The negative covenants provide, among other things, that without the prior consent of Innovatus subject to certain exceptions, the Company may not dispose of certain assets, engage in certain business combinations or acquisitions, incur additional indebtedness or encumber any of the Company's property, pay dividends on the Company's capital stock or make prohibited investments. The 2017 Term Loan agreement provides that an event of default will occur if, among other triggers, (i) the Company defaults in the payment of any amount payable under the agreement when due, (ii) there occurs any circumstance(s) that could reasonably be expected to result in a material adverse effect on the Company's business, operations or condition, or on the Company's ability to perform its obligations under the agreement, (iii) the Company becomes insolvent, (iv) the Company undergoes a change in control or (v) the Company breaches any negative covenants or certain affirmative covenants in the agreement or, subject to a cure period, otherwise neglects to perform or observe any material item in the agreement.

For the year ended December 31, 2017, the Company was in compliance with all covenants of the 2017 Term Loan.

Upon an event of default in any of the 2017 Term Loan covenants, the repayment of the 2017 Term Loan may be accelerated and the applicable interest rate will be increased by 4.0% until the default is cured. Although repayment of the 2017 Term Loan can be accelerated under certain circumstances, the Company believes acceleration of this loan is not probable as of the date of these financial statements. Accordingly, the Company has reflected the amounts of the 2017 Term Loan due beyond twelve months of the balance sheet date as non-current.

In connection with the 2017 Term Loan, the Company paid issuance costs of $449,000 to Innovatus and an additional $119,000 to third parties. These fees were recorded as discounts to the carrying value of the 2017 Term Loan. The Company also issued Innovatus warrants on the closing date of the 2017 Term Loan, to purchase 15,384,615 shares of Series F redeemable convertible preferred stock at an exercise price of $0.078 per share. These warrants are immediately exercisable and will expire if unexercised seven years after their issuance. The fair value of the warrants on the date of issuance was $1.0 million and was recorded as a discount to long-term debt and an offsetting amount recognized as a liability. The resulting debt discount is being amortized to interest expense using the effective interest method over the term of the 2017 Term Loan.

2013 Term Loan

In October 2013, the Company executed a term loan agreement (the 2013 Term Loan) with Capital Royalty Partners II L.P. and its affiliates Parallel Fund "a" L.P. and Parallel Investment Opportunities Partners II L.P. (collectively Capital Royalty). The total outstanding principal borrowed under the 2013 Term Loan was $15.0 million dollars. Amounts borrowed on the 2013 Loan accrued interest at 14.0% per annum with interest-only payments due on a quarterly basis with payment dates fixed at the end of

each calendar quarter, or Payment Dates, through September 30, 2017. Under the terms of the loan, the Company elected to pay interest as follows: 10.0% per annum in cash and 4.0% per annum paid in-kind in the form of additional term loans, or PIK Loans. For the year ended December 31, 2017, the Company issued PIK Loans totaling $342,000.

In connection with the 2013 Term Loan, the Company issued a total of 4,174,430 warrants to purchase shares of Series D redeemable convertible preferred stock (Note 7) and an additional 3,186,430 warrants to purchase shares of common stock (Note 7) to Capital Royalty and a third party.

In September 2017, at the time of the repayment of all outstanding amounts, the difference between the carrying value of the 2013 Term Loan and the total principal and accrued interest of $306,000 was recorded within Loss on extinguishment of share purchase rights and 2013 Term Loan in the accompanying statement of operations.

Future Minimum Payments on the Outstanding Borrowings

At December 31, 2017, the future minimum aggregate payments, including interest, for outstanding borrowings under the 2017 Term Loan are as follows (in thousands):

Year Ending December 31,	
2018	$ 1,733
2019	1,909
2020	4,931
2021	12,023
2022	9,051
Total	29,647
Less:	
Unamortized debt discount and issuance costs	(1,351)
Interest	(9,487)
Total borrowings, net of discounts and debt issuance costs	$18,809

Note 7. Warrants to Purchase Common or Preferred Stock

Warrants to Purchase Common Stock

2013 Loan Common Stock Warrants

In connection with the 2013 Term Loan issued in October 2013 (Note 6), the Company issued warrants, or the 2013 Loan Common Stock Warrants, to purchase 3,186,430 shares of common stock exercisable at $0.01 per share. The 2013 Loan Common Stock Warrants are classified as a component of equity and are immediately exercisable and have a ten-year contractual term. The warrants expire in October 2023 and remain outstanding as of December 31, 2017. All outstanding 2013 Loan Common Stock Warrants terminate if not exercised prior to the completion of an initial public offering.

2016 Common Stock Warrants

In connection with the issuance of Series E redeemable convertible preferred stock during 2016, the Company issued 166,813,448 warrants to purchase common stock, or the 2016 Common Stock

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Warrants, exercisable at $0.01 per share. The 2016 Common Stock Warrants are classified as component of equity and are immediately exercisable and have a ten-year contractual term. The 2016 Common Stock Warrants remain outstanding as of December 31, 2017.

In addition to the above, the Company has 1,695,470 common stock warrants outstanding as of December 31, 2017 and currently exercisable at $3.75 per share. These common stock warrants expire between June 2018 and October 2021. No amounts have been recorded for these common stock warrants as their fair value was determined to be immaterial. These common stock warrants terminate if not exercised prior to the completion of an initial public offering.

Warrants to Purchase Redeemable Convertible Preferred Stock

2013 Loan Redeemable Convertible Preferred Stock Warrants

In connection with the 2013 Term Loan issued in October 2013 (Note 6), the Company issued 3,186,430 and 988,000 warrants to purchase shares of Series D redeemable convertible preferred stock at $0.25 per share to its lender, Capital Royalty, and a third-party investment adviser, respectively. The Company collectively refers to the warrants described above as the 2013 Loan Redeemable Convertible Preferred Stock Warrants. The $1.0 million aggregate fair value of the warrants was recorded as a discount to the carrying value of the 2013 Term Loan and was amortized to interest expense over its respective term. The 2013 Term Loan was repaid in conjunction with the issuance of the 2017 Term Loan (Note 6). The 3,186,430 warrants issued to Capital Royalty and the 988,000 warrants issued to the third-party investment adviser are immediately exercisable and expire in October 2023 and November 2023, respectively, and remain outstanding at December 31, 2017. All outstanding 2013 Loan Redeemable Convertible Preferred Stock Warrants terminate if not exercised prior to the completion of an initial public offering.

The 2013 Loan Redeemable Convertible Preferred Stock Warrants are classified as liabilities, with changes in fair value recorded through earnings, as the as the underlying shares of Series D redeemable convertible preferred stock can be redeemed by the holders of these shares upon the occurrence of certain events that are outside of the control of the Company (Note 10). The Company estimated the fair value of the 2013 Loan Redeemable Convertible Preferred Stock Warrants using the market approach and estimated the fair value of each class of equity securities as the net value of a series of call options, representing the present value of the expected future returns to each class of equity securities. The significant inputs to this valuation methodology included the rights and preferences of each class of Company's shares (Note 10), Management's assumptions related to the expected timing of a liquidation event, and the Company's estimated equity value and volatility assumptions on the valuation date, which are based on management's analysis of comparable publicly traded peer companies.

For the year ended December 31, 2017, the change in fair value of 2013 Loan Redeemable Convertible Preferred Stock Warrants was a benefit of $37,000, which was recorded in change in fair value of financial instruments in the accompanying statement of operations.

2015 Warrants

In 2015, the Company issued a variable number of warrants, the 2015 Warrants, which became a fixed and immediately exercisable warrant to purchase 2,688,181 shares of Series E redeemable convertible preferred stock at an exercise price of $0.25 per share as a result of the issuance of Series E redeemable convertible preferred stock in January 2016. Upon issuance, the Company estimated

the fair value of the 2015 Warrants to be $87,000. The 2015 Warrants expire in October 2020 and remain outstanding at December 31, 2017. All outstanding 2015 Warrants terminate if not exercised prior to the completion of an initial public offering, a change in control, reorganization, or liquidation.

The 2015 Warrants are classified as liabilities, with changes in fair value recorded through earnings, as the as the underlying shares of Series E redeemable convertible preferred stock can be redeemed by the holders of these shares upon the occurrence of certain events that are outside of the control of the Company (Note 10). For the year ended December 31, 2017, the Company recognized a benefit of $19,000 related to the changes in fair value of the 2015 Warrants, which was recorded in change in fair value of financial instruments in the accompanying statement of operations. Changes in the fair value of the 2015 Warrants were computed using the methodology described above.

2017 Warrants

In connection with the issuance of the 2017 Term Loan (Note 6) in September 2017, the Company issued warrants to Innovatus (the 2017 Warrants), which are immediately exercisable to purchase 15,384,615 shares of Series F redeemable convertible preferred stock at an exercise price of $0.078 per share. The 2017 Warrants are classified as liabilities, with subsequent changes in fair value recorded through earnings, as the underlying shares of Series F redeemable convertible preferred stock can be redeemed by the holders of these shares upon the occurrence of certain events that are outside of the control of the Company (Note 10). Upon their issuance, the fair value of the 2017 Warrants were estimated to be $1.0 million using the methodology described above. Since the 2017 Warrants are to be measured at fair value and were issued in conjunction with the 2017 Term Loan, the estimated fair value of the warrants issued was recorded as a discount to the carrying value of the 2017 Term Loan upon issuance.

For the year ended December 31, 2017, the change in the fair value of the 2017 Warrants was a benefit of $185,000 which was recorded in change in fair value of financial instruments in the accompanying statement of operations. Changes in the fair value of the 2017 Warrants were computed using the methodology described above.

The 2017 Warrants will expire in September 2024 and remain outstanding at December 31, 2017. All outstanding 2017 Warrants terminate if not exercised prior to the completion of a change in control. If, in the Company's next round of equity financing, the Company issues preferred stock at a price per share lower than $0.078, the 2017 Warrants will become exercisable at the issuance price of, and for that class of preferred shares issued. The number of such shares to be issued will be adjusted to equal $1,200,000 divided by the issuance price.

Note 8. Commitments and Contingencies

Leases

The Company leases approximately 14,000 square feet of office and laboratory space in Vista, California, under a lease that expires in January 2021, with options to extend the lease for two additional 36-month periods. In addition, the Company also leases approximately 19,500 square feet of office space in Vista, California, under a lease that expires in January 2021 with an option to extend the lease for an additional 24-month period. The Company's lease payments under each of these leases are subject to escalation clauses.

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Minimum annual lease payments under non-cancelable lease arrangements at December 31, 2017 are as follows (in thousands):

Year Ending December 31,	Capital Leases	Operating Leases
2018	$ 25	$ 386
2019	28	399
2020	28	411
2021	28	34
2022	3	–
Total minimum lease payments	112	$ 1,230
Less: amount representing interest	(4)	
Present value of future minimum lease payments	108	
Less: current portion	(27)	
Long-term capital lease obligations	$ 81	

For the year ended December 31, 2017, rent expense was $424,000.

Acquisition-related liabilities

In connection with the acquisition of the medical diagnostics division of Cypress Bioscience, Inc. in 2010, the Company was required to pay certain amounts in the event that certain revenue milestones were achieved and upon the first commercial sale of a product associated with this acquisition. The acquisition also included amounts that may be due under several licensing agreements. The Company has accounted for the related liabilities at fair value at each period end, using a probability weighted discounted revenue model. At December 31, 2016, the fair value of the obligations under these agreements was $51,000 and related to licensing agreements with Cellatope and Royalty Pharma.

In January of 2017, the Company amended its agreements with Cellatope. As a result of this amendment, the obligation to pay Cellatope a one-time payment of $3.0 million upon the launch of a monitoring product incorporating CB-CAPs technology was replaced with an agreement to pay Cellatope a one-time payment of $100,000 upon the launch of such a product, plus a 7.5% royalty based on future cash collections from sales of that product which incorporate the licensed technology. Future royalties payable under this arrangement are limited to the lesser of $3,000,000 (including the upfront payment of $100,000) or the total royalty earned through January 1, 2024.

In February of 2017, the Company amended its agreements with Royalty Pharma relating to the launch of monitoring product using CB-CAPs technology. As a result of this amendment, the obligation to make a one-time payment of $1.0 million upon the launch of a monitoring product incorporating CB-CAPs technology was replaced with an agreement to pay Royalty Pharma a one-time payment of $100,000 upon the launch of such a product, plus a 2.5% royalty based on future cash collections from sales of that product which incorporate the licensed technology. Future royalties under this arrangement are limited to the lesser of $1,200,000 (including the upfront payment of $100,000) or the total royalty earned through January 1, 2024.

Based on an evaluation of the facts and circumstances leading to these amendments, including the length of time between these amendments and the original agreements with Cellatope and Royalty

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Pharma that were assigned to the Company in the acquisition of Cypress Bioscience, Inc. in 2010, and the concessions offered by the licensees, the Company concluded that these amendments should be accounted for separately from the original agreements with Cellatope and Royalty Pharma. As such, future royalties from the sale of monitoring products which incorporate the licensed technologies will be accrued upon the collection of cash from sale of such products and the Company will no longer recognize or remeasure a contingent liability for these obligations. As a result of the derecognition of this liability upon the execution of these amendments, the Company recorded a benefit of $51,000 to change in fair value of acquisition-related liabilities in the accompanying statement of operations.

Also in connection with the acquisition of Cypress Bioscience, Inc. in 2010, the obligation for an additional $2.0 million milestone payment to Prometheus exists for which the fair value of the obligation was determined to be nil at December 31, 2017.

Licensing Agreements

The Company has licensed technology for use in its diagnostic tests. In addition to the milestone payments required by these agreements as described above, individual license agreements generally provide for ongoing royalty payments on net sales of products which incorporate licensed technology, as defined, ranging from 3.0% to 20.0%. Royalties are accrued when earned and recorded in costs of revenue in the accompanying statement of operations.

Contingencies

In the normal course of business, the Company enters into contracts and agreements that contain a variety of representations and warranties and provide for general indemnifications. The Company's exposure under these agreements is unknown because it involves claims that may be made against the Company in the future, but have not yet been made. The Company accrues a liability for such matters when it is probable that future expenditures will be made and such expenditures can be reasonably estimated.

Litigation

The Company is not a party to any litigation and does not have contingent reserves established for any litigation liabilities.

Note 9. Fair Value Measurements

The following table sets forth the Company's financial instruments that were measured at fair value on a recurring basis within the fair value hierarchy as of December 31, 2017 (in thousands):

	Total	Level 1	Level 2	Level 3
Assets:				
Money market funds	$9,961	$9,961	$ –	$ –
Liabilities:				
Redeemable convertible preferred stock warrant liabilities	$ 896	$ –	$ –	$ 896

The inputs and assumptions used to estimate the fair value of share purchase rights, warrants to purchase redeemable convertible preferred stock, and acquisition-related liabilities are discussed in Note 5, Note 7, and Note 8, respectively. The fair value of the Company's money market funds is based on quoted market prices.

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The following table includes a roll-forward of the financial instruments measured on a recurring basis and classified within Level 3 of the fair value hierarchy (in thousands):

	Total Amounts	Acquisition-Related Liabilities	Liability Classified Warrants	Share Purchase Rights	Tranche Participation Rights
Balances at December 31, 2016	$ 5,839	$ 51	$ 137	$ 5,651	$ –
Issuance of share purchase rights for cash (Note 5)	3,763	–	–	3,763	–
Conversion of share purchase rights in connection with the first tranche issuance of Series F redeemable convertible preferred stock (Note 10)	(19,508)	–	–	(19,508)	–
Issuance of tranche participation rights in connection with the first tranche closing of Series F redeemable convertible preferred stock (Note 10)	2,308	–	–	–	2,308
Exercise of tranche participation rights in connection with second tranche closing of Series F redeemable convertible preferred stock (Note 10)	(1,846)	–	–	–	(1,846)
Issuance of warrants to purchase shares of Series F redeemable convertible preferred stock in connection with 2017 Term Loan (Note 6)	1,000	–	1,000	–	–
Remeasurement of financial instruments	9,340	(51)	(241)	10,094	(462)
Balances at December 31, 2017	$ 896	$ –	$ 896	$ –	$ –

Changes in the fair value of the Company's acquisition-related liabilities are recorded in the line item change in fair value of acquisition-related liabilities in the accompanying statement of operations.

Changes in the fair value of the Company's liability classified warrants, share purchase rights, and tranche participation rights are recorded in the line item change in fair value of financial instruments in the accompanying statement of operations.

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Note 10. Redeemable Convertible Preferred Stock

Description of Redeemable Convertible Preferred Stock

At December 31, 2017, the Company's redeemable convertible preferred stock consists of the following:

Series	Shares Authorized	Shares Outstanding	Per Share Liquidation Preference	Per Share Redemption Price	Carrying Value (in thousands)
Series A-3	1,400,000	1,369,185	$ 7.50	$ 7.50	$ 753
Series B-3	3,100,000	3,030,584	0.25	0.25	43
Series C	16,700,000	16,637,570	0.50	0.50	6,862
Series D	9,800,000	5,533,898	0.38	0.38	3,212
Series E	169,300,000	166,550,058	0.38	0.38	42,718
Series F	550,000,000	304,570,462	0.156	0.156	38,458
Total	750,300,000	497,691,757			$ 92,046

The significant rights and preferences of the Company's redeemable convertible preferred stock are as follows:

Dividends

With the exception of Series A-3 redeemable convertible preferred stock, each holder of preferred stock is entitled to noncumulative dividends at an annual rate of $0.02 per share when and if declared by the Board of Directors. Dividends are paid in the following order of preference: (i) Series F, (ii) Series E, (iii) Series D, (iv) Series C, (v) Series B-3, (vi) Series A-3, and (vii) common stock.

No dividend shall be declared or be payable on the outstanding shares of the Series B-3 redeemable convertible preferred stock without the consent of the holders of at least 53% of the outstanding shares of the Series F, Series E, Series D, and Series C redeemable convertible preferred stock, voting together as a single class, and no dividend shall be declared or be payable on the outstanding shares of the Series A-3 redeemable convertible preferred stock or the common stock, other than a dividend on shares of common stock payable entirely in shares of common stock, without the consent of the holders of at least 52% of the outstanding shares of the Series F, Series E, Series D, Series C, and Series B-3 redeemable convertible preferred stock. As of December 31, 2017, the Board of Directors has not declared any dividends.

Liquidation

At December 31, 2017, the Series A-3, Series B-3, Series C, Series D, Series E, and Series F redeemable convertible preferred shares have liquidation preferences of $7.50, $0.25, $0.50, $0.38, $0.38, and $0.156 per share, respectively. On May 11, 2018, the Series F liquidation preference increased to $0.234 per share. In the event of a liquidation, the Series F liquidation preference is paid prior to any other preferences. Upon the satisfaction of the Series F preference, incremental proceeds from a liquidation event will be split between holders of Series F and Series E shares based on the ratio of the total aggregate purchase price of Series F shares and Series E shares, respectively, to the sum of the aggregate purchase price of Series F shares and the aggregate liquidation preference of the then outstanding Series E shares until the incremental proceeds received by Series E holders in this manner equals the Series E liquidation preference. After the Series E liquidation preference has

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been satisfied, the Series D liquidation preference is paid prior to the preferences for Series C, Series B-3, and Series A-3, the Series C liquidation preference is paid prior to the preferences for Series B-3 and A-3, the Series B-3 liquidation preference is paid prior to the preference for Series A-3, then the Series A-3 preference is paid. Following the satisfaction of the liquidation preferences, all shares participate in any remaining distribution based on the number of common shares into which their shares are convertible.

Conversion

Each share of redeemable convertible preferred stock is automatically convertible into common stock at its then effective conversion price, (i) upon the election of the holders of at least 52% of the then outstanding shares of preferred stock, voting together as a single class, or (ii) upon the completion of a firm underwritten public offering of the Company's common stock with net proceeds (after underwriter's discounts and commissions) of at least $20.0 million, at a minimum valuation of $100,000,000.

In addition, each share of the Company's Series A-3, Series B-3, Series C, Series D, Series E, and Series F redeemable convertible preferred stock are convertible, at the option of the holder, into shares of common stock by dividing the initial conversion prices by the conversion price in effect at the time of conversion. As a result of the issuance of Series F redeemable convertible preferred stock in 2017, the conversion price of Series B-3, Series C, Series D and Series E redeemable convertible preferred stock was adjusted to $0.078.

The following table summarizes the number of shares of common stock into which each share of redeemable convertible preferred stock can be converted at December 31, 2017:

Series	Initial Conversion Price	Current Conversion Price	Conversion Ratio to Common Stock
Series A-3	$ 7.500	$ 7.500	1.00
Series B-3	$ 0.250	$ 0.078	3.21
Series C	$ 0.250	$ 0.078	3.21
Series D	$ 0.250	$ 0.078	3.21
Series E	$ 0.250	$ 0.078	3.21
Series F	$ 0.078	$ 0.078	1.00

The conversion price of Series B-3, Series C, Series D, Series E, and Series F redeemable convertible preferred stock is subject to adjustment for recapitalization (i.e. stock dividends, stock splits, reorganization, reclassification, combination of shares), or upon the issuance of shares at a price less than the then current conversion price.

Voting

With the exception of the Series A-3 redeemable convertible preferred stock, the holder of each share of preferred stock is entitled to one vote for each share of common stock into which it would convert. The holders of Series A-3 redeemable convertible preferred stock have no voting rights, except as required by law.

Redemption

Upon the request in writing of the holders of 52% of the outstanding shares of Series B-3, Series C, Series D, Series E, and Series F redeemable convertible preferred stock, voting together as a single

class, at any time after May 10, 2022, the holders may redeem the outstanding Series B-3, Series C, Series D, Series E and Series F redeemable convertible preferred stock at the stated redemption price as noted in the table above, plus any declared but unpaid dividends.

The Company is accreting the carrying amounts of the preferred stock up to the redemption amount at May 10, 2022, the earliest possible date, using the effective interest method.

Shares of Series A-3 redeemable convertible preferred stock have been included in temporary equity in the balance sheets as certain events such as a change in control or a significant a transfer of Company assets to a third party can compel the Company to redeem the shares of Series A-3 redeemable convertible preferred stock. These events have been deemed to be outside the control of the Company because they can be compelled by the holders of the Company's Series B-3, Series C, Series D, Series E, and Series F redeemable convertible preferred stock through their voting interests.

Series F Financing

In May 2017, the Company entered into an agreement with certain existing preferred shareholders, who were also the holders of the Company's then outstanding share purchase rights (Note 5), to issue shares of Series F redeemable convertible preferred stock (Series F) in multiple separate closings at per share price of $0.078 in each closing. All investors in the first tranche closing were obligated to participate in a second tranche closing, and had the option to participate in any additional closings the Company might offer. The second tranche closing required all investors in the first closing to purchase an aggregate of 48,076,833 additional shares of Series F at $0.078 per share. Shares of Series F were issuable under the Series F preferred stock purchase agreement until the earlier of December 31, 2017 or the issuance of all authorized Series F shares, as specified in the Company's amended and restated certificate of incorporation.

In the first tranche closing of the Series F financing in May, 2017, the Company issued 48,076,833 shares of Series F at $0.078 per share for aggregate proceeds of $3.7 million and an additional 163,785,334 shares of Series F in exchange for the extinguishment of the outstanding notional amount (including accrued interest) of all outstanding share purchase rights (Note 5), which totaled $10.2 million.

The issuance price of Series F also resulted in adjustments to the conversion rates of the Company's previously outstanding shares of Series B-3, Series C, Series D and Series E redeemable convertible preferred stock. Prior to the issuance of shares of Series F, each of these shares were convertible into a single share of common stock. As a result of the issuance of shares of Series F, each of these shares is convertible into 3.21 shares of common stock. As a result of the change in the conversion ratio, the Company recognized a beneficial conversion feature totaling $485,000 as a discount to the carrying value of the Company's preferred stock and an increase to additional paid-in capital in the accompanying balance sheet. This discount will be accreted against income available to common stockholders through the fifth anniversary of the issuance of Series F, which is the earliest period these preferred shares can be redeemed.

The Company concluded that the first closing of the Series F preferred stock purchase agreement contained two freestanding financial instruments: (1) shares of Series F and (2) tranche participation rights which, for a fixed amount of consideration in the second closing, required investors to purchase Series F in the second tranche closing at a fixed price of $0.078 per share. The Company evaluated the various conversion and redemption features embedded in shares of Series F (which are

summarized above) and concluded that none of these features should be bifurcated from the Series F share and accounted for as a separate derivative instrument. The Company further evaluated the conversion features embedded in shares of Series F and determined they did not represent beneficial conversion features, as described in the related accounting literature. The Company determined there were no embedded features requiring bifurcation in the tranche participation rights.

The Company estimated the total fair value of Series F and participation rights purchased by investors that were issued in the first closing as $26.7 million. The Company estimated the fair value of a share of Series F using an option pricing method (OPM) which estimates the fair value of each class of equity securities as the net value of a series of call options, representing the present value of the expected future returns to each class of equity securities. The Company determined that the tranche participation rights represented a liability of $2.3 million on the date of the Series F financing as it was predominantly indexed to an obligation to purchase shares of Series F. This liability was marked to market through earnings. Due to the short duration of the participation rights, the Company estimated the fair value of the tranche participation rights using a method that considered the difference between the estimated fair value and issuance price of shares of Series F to be issued in the second tranche closing and the time value of money.

Since all investors in the first closing are existing preferred stockholders of the Company, the Company accounted for the $5.7 million difference between the fair value of shares of Series F, the proceeds received, the tranche participation rights issued, and the carrying value of the share purchase rights converted as a loss on the extinguishment of the share purchase rights, which was recorded in Loss on extinguishment of share purchase rights and 2013 Term Loan in the accompanying statement of operations.

In August 2017, the investors in the first tranche closing modified the terms of the participation rights to reduce the number of shares of Series F required to be purchased at $0.078 per share to 38,461,539 and to allow for the participation of an additional investor in the second tranche closing. As a result of this modification, the Company estimated the fair value of the tranche participation right to be $1.8 million and recorded the resulting benefit of $462,000 through earnings in the line item change in fair value of financial instruments in the accompanying statement of operations.

In August 2017, the Company completed the second tranche closing with an additional investor under the Series F preferred stock purchase agreement. The Company concluded that the second tranche closing of the Series F preferred stock purchase agreement contained a single freestanding financial instrument, shares of Series F, and, as discussed above, the Company determined there were no embedded features requiring bifurcation in shares of Series F. The Company determined that the change in the fair value of the tranche participation rights between the dates of the first and second closing was immaterial. The second tranche closing resulted in the issuance of 38,461,539 additional shares of Series F for aggregate proceeds of $3.0 million, and the reduction of $1.8 million to the estimated fair value of the previously recognized tranche participation rights.

Exagen Inc.

Notes to Financial Statements

The following table presents a summary of the accounting for the completion of the first and second tranche closings (in thousands):

Fair value of Series F shares issued	$ 31,540
Cash received upon issuance of Series F shares	(6,750)
Conversion of share purchase rights in conjunction with first tranche closing (Note 5)	(19,508)
Change in fair value of tranche participation rights in conjunction with modification in second tranche closing	462
Loss on extinguishment of share purchase rights in conjunction with first and second tranche closing	$ 5,744

In December 2017, the Company's Board of Directors authorized a third tranche closing of the Series F financing, which was completed between December 2017 and January 2018. In December 2017, a group of existing investors of the Company purchased 54,246,756 shares of Series F at a per share price of $0.078 for aggregate proceeds of $4.2 million. In early January 2018, a group of existing investors of the Company purchased an additional 34,914,327 shares of Series F at a per share price of $0.078 for aggregate proceeds of $2.7 million.

The Company concluded that the third tranche closing of the Series F preferred stock purchase agreement contained a single freestanding financial instrument, shares of Series F, and the Company determined there were no embedded features requiring bifurcation in the shares of Series F issued in the third tranche closing. The Company accounted for the difference between the estimated fair value and the $0.078 per share purchase price of shares of Series F issued in the third tranche closing as a deemed dividend since all investors in the third closing are existing preferred shareholders of the Company, and the Company did not identify any elements to the transaction which it believes were compensatory in nature. As a result, the Company recognized a deemed dividend in the amount of $1.8 million that was recorded as additional paid-in capital (in the absence of retained earnings) in the accompanying statement of redeemable convertible preferred stock and stockholders' deficit.

Note 11. Stockholders' Deficit

Common Stock

Common stockholders are entitled to dividends as and when declared by the Board of Directors, subject to the rights of holders of all classes of stock outstanding having priority rights as to dividends. There have been no dividends declared to date. The holder of each share of common stock is entitled to one vote.

In May 2017, the Company's certificate of incorporation was amended and restated to authorize the issuance of up to 550,000,000 shares of Series F redeemable convertible preferred stock, and increase the number of authorized shares of common stock from 850,000,000 to 1,470,000,000.

Exagen Inc.

Notes to Financial Statements

At December 31, 2017, the Company had common shares reserved for future issuance upon the exercise or conversion of the following:

	Number of Shares
Redeemable convertible preferred stock	920,529,726
Warrants to purchase redeemable convertible preferred stock	37,380,163
Warrants to purchase common stock	171,695,348
Common stock option grants issued and outstanding	12,762,357
Common shares available for grant under the stock option plan	1,415,333
Total common shares reserved for future issuance	1,143,782,927

Note 12. Stock Option Plan

In December 2012, the Company's Board of Directors adopted the 2013 Stock Option Plan (the Plan). Pursuant to the Plan, employees, consultants, and directors may be granted either incentive stock options or non-qualified stock options to purchase shares of the Company's common stock. As of December 31, 2017, 1,415,333 shares remained available for future awards.

The exercise price of each stock option is established by the Board of Directors and is based on the estimated fair value of the Company's common stock on the grant date. The options generally expire ten years after the date of grant and are exercisable to the extent vested. Vesting is established by the Board of Directors and is generally no longer than four years from the date of grant.

Activity under the Company's stock option plans is set forth below:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding, December 31, 2016	14,169,063	$ 0.17	6.5	$ –
Granted	220,000	$ –		
Exercised	–	$ –		
Forfeited	(297,774)	$ 0.18		
Expired	(1,328,932)	$ 0.30		
Outstanding, December 31, 2017	12,762,357	$ 0.15	5.63	$ –
Vested and expected to vest, December 31, 2017	12,526,878	$ 0.15	5.63	$ –
Options exercisable, December 31, 2017	11,169,635	$ 0.15	5.38	$ –

The weighted-average exercise price of current year grants is less than $0.01 per share.

Stock-Based Compensation Expense

The estimated weighted-average grant date fair value of each share of common stock was less than $0.01 at December 31, 2017.

Exagen Inc.

Notes to Financial Statements

For the year ended December 31, 2017, the fair value of employee stock options was estimated using the following assumptions used to determine the fair value of stock options granted:

Expected volatility	48% - 70%
Risk-free interest rate	0.9% - 1.4%
Dividend yield	–
Expected term (in years)	6.08

For the year ended December 31, 2017, total non-cash stock-based compensation expense recorded related to options granted in the statement of operations is as follows (in thousands):

Cost of revenue	$ 21
Selling, general and administrative	154
Research and development	12
Total	$187

As of December 31, 2017, total unrecognized compensation cost was $117,000, which is expected to be recognized over a remaining weighted-average vesting period of 1.3 years.

Note 13. Income Taxes

For the year ended December 31, 2017, the benefit for income taxes consists of the following (in thousands):

Current:	
Federal	$ –
State	5
Total current	5
Deferred:	
Federal	(625)
State	71
Total deferred	(554)
Income tax benefit	$(549)

The Tax Cuts and Jobs Act (the Act) was enacted on December 22, 2017. The Act reduces the U.S. federal corporate tax rate from 35% to 21%. At December 31, 2017, the Company re-measured its deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%. As a result of the re-measurement of the Company's deferred tax assets and liabilities, the Company recognized income tax expense of $10.6 million. This amount was offset by a reduction in the valuation allowance of $11.1 million. $549,000 of the reduction in the valuation allowance resulted from the reclassification of certain of the Company's deferred tax assets as indefinite-lived, as a result of the Act, which are now able to offset the Company's indefinite-lived deferred tax liabilities.

The Company's tax expense in the prior year is primarily related to an increase in the deferred tax liabilities associated with tax deductible amortization of goodwill and intangible assets and the difference between the revenue we recognize for tax purposes and for financial statement purposes.

Exagen Inc.

Notes to Financial Statements

At December 31, 2017, the effective tax rate of our provision for income taxes differs from the federal statutory rate as follows:

Federal statutory tax rate	34.0%
State income taxes, net of federal tax benefits	1.2%
Change in fair value of share purchase rights	(12.5)%
Loss on extinguishment	(7.9)%
Enactment of Tax Cuts and Job Act	(40.3)%
Change in valuation allowance	27.6%
Effective tax rate	2.1%

Significant components of the Company's deferred tax assets at December 31, 2017 are shown below. A valuation allowance has been established as realization of the Company's deferred tax assets has not met the more likely-than-not threshold requirement. If the Company's judgment changes and it is determined that the Company will be able to realize these deferred tax assets, the tax benefits relating to any reversal of the valuation allowance on deferred tax assets will be accounted for as a reduction to income tax expense (in thousands).

Deferred tax assets:	
Net operating loss carryforwards	$ 18,044
Accrued revenue(1)	1,543
Research and development tax credits	96
Accruals, reserves and other	412
Basis differences in fixed and intangible assets	222
Total gross deferred tax assets	20,317
Less: Valuation allowance	(19,929)
Deferred tax assets, net	388
Deferred tax liabilities:	
Financing and acquisition-related liabilities	(334)
Indefinite lived assets	(268)
Deferred tax liabilities, net	(602)
Net deferred tax liabilities	$ (214)

(1) The deferred tax liability for uncollectible accounts has been netted with the accrued revenue deferred tax asset for presentation purposes as the nature of these deferred items are related.

Changes in the valuation allowance for deferred tax assets during the year ended December 31, 2017, which related primarily to increases in net operating loss carryforwards, accrued revenue and accruals and reserves, and impacts of the Tax Cuts and Jobs Act were as follows (in thousands):

Valuation allowance at the beginning of the year	$27,146
Decreases recorded as benefits to income tax provision	(7,217)
Increases recorded to income tax provision	–
Valuation allowance at the end of the year	$19,929

Exagen Inc.

Notes to Financial Statements

At December 31, 2017, the Company had federal and state net operating loss carryforwards of approximately $77.5 million and $30.3 million, respectively. The federal tax loss carryforwards will begin to expire in 2022, unless previously utilized. The Company's state tax loss carryforwards will expire in 2032, unless previously utilized.

Pursuant to Internal Revenue Code (IRC), Section 382 and 383, use of the Company's U.S. federal and state net operating loss and research and development income tax credit carryforwards may be limited in the event of a cumulative change in ownership of more than 50.0% within a three-year period. The Company had an ownership change in 2008 and, as a result, certain carryfowards are subject to an annual limitation, reducing the amount available to offset income tax liabilities absent the limitation.

The Company is subject to taxation in the U.S. and in various state jurisdictions. The Company's tax years for 2002 and forward are subject to examination by the U.S. and state tax authorities due to the carryforward of unutilized net operating losses and research and development credits.

The Company recognizes interest and / or penalties related to income tax matters in its provision for income taxes. The Company does not have any accruals for, and did not recognize any, interest or penalties in these financial statements for the year ended December 31, 2017.

Uncertain Tax Positions

At December 31, 2017, the Company has unrecognized tax benefits of $0. The following table summarizes the changes to the Company's unrecognized tax benefits for the year ended December 31, 2017 (in thousands):

Balance at the beginning of the year	$ 430
Decreases in tax positions related to prior period	(430)
Balance at the end of the year	$ –

Due to the existence of the valuation allowance, future changes in unrecognized tax benefits would have no effect on the Company's effective tax rate. The Company does not believe that the balance of unrecognized tax benefits will materially change within the next twelve months.

Note 14. Related Parties

The Company entered into various agreements under which directors of the Company are paid for consulting services and for serving on the Board of Directors. In June of 2017, two members of the Company's Board of Directors resigned their position as members of the Board of Directors and the Company terminated all previously existing agreements which required payments to board members for their services. Total compensation expense paid to board members under these various agreements for the year ending December 31, 2017 was $81,000, which has been recorded in selling, general & administrative expenses in the accompanying statement of operations.

In September 2017, the Company entered into a consulting services agreement with a member of the Company's Board of Directors under which this board member will provide certain scientific consulting services to the Company. Under this agreement, this board member will be compensated at a bi-weekly rate of $4,900 per week (plus reimbursement for certain administrative and travel related expenses) and received options to purchase 100,000 shares of common stock in November 2017.

Exagen Inc.

Notes to Financial Statements

Total amounts paid to this board member under this agreement for the year ending December 31, 2017 were $52,000, which was recorded in research and development expenses in the accompanying statement of operations. The Company accounted for the grant of options as an award to a non-employee and will measure compensation cost for this award based on the value of the award at the date the consulting services are complete. The options granted to this board member were granted at an exercise price of $0.002 (the estimated fair value of share of common stock on the grant date using an OPM model), and vests over a three-year term expected to coincide with the period the board member is expected to provide consulting services to the Company. At December 31, 2017, the estimated fair value of the awards and related compensation cost recognized during the year ended December 31, 2017 was immaterial. All compensation cost related to these awards is recorded in research and development expenses in the accompanying statement of operations.

In 2016, the Company leased office space in New Mexico on a month-to-month basis from a third party which specializes in providing outsourced information technology support services, and a partner in this company was an immediate family member of an executive at the Company. At December 31, 2017, the Company no longer leases this facility and this executive is no longer employed by the Company. Total expenses related to information technology support services provided by this related party for the year ended December 31, 2017 was $159,000. The total rent expense related to this rental agreement for the year ending December 31, 2017 was $20,000, which was recorded in selling, general & administrative expenses in the accompanying statement of operations.

In September 2011, the Company entered into a license agreement with the Company's Chief Scientific Officer, and a related company, De Novo. The license agreement, covering novel methods for monitoring low-dose methotrexate therapy, relates to technology developed by the Company's Chief Scientific Officer prior to joining the Company. The technology has yet to be used by the Company. Under the agreement, the Company's Chief Scientific Officer will be eligible to receive up to $600,000 upon the achievement of certain sales milestones and an ongoing royalty of 5% on sales.

The share purchase rights described in Note 5 were issued to existing holders of the Company's preferred stock. The first and third tranche closings of the Series F financing described in Note 10 were issued to existing holders of the Company's redeemable convertible preferred stock.

Note 15. 401(k) Plan

The Company sponsors an employee savings plan that qualifies as a deferred salary arrangement under Section 401(k) of the Code. Participating employees may defer up to the Internal Revenue Service annual contribution limit. Additionally, the Company may elect to make contributions into the savings plan at its sole discretion. For the year ended December 31, 2017, the Company made contributions to the Plan at 3% of qualified employee compensation, which totaled $362,000.

Note 16. Subsequent Events

The Company has evaluated subsequent events through February 1, 2019, the date the financial statements were available for issuance. Except as described below, the Company has concluded that no subsequent events have occurred that require disclosure.

Collaborative Arrangement with GlaxoSmithKline LLC (GSK)

In January 2018, the Company entered into a collaborative arrangement with GlaxoSmithKline LLC (GSK), under which the Company has agreed to provide GSK de-identified data related to the performance of certain diagnostic and monitoring tests. In exchange, GSK has agreed to make payments totaling up to $353,000 during the one-year term of this agreement.

Exagen Inc.

Notes to Financial Statements

Supply Agreement

In January 2018, the Company entered into a supply agreement with one supplier which includes a minimum annual purchase commitment of $3.25 million for each of the three years covered by the agreement.

2013 Stock Option Plan

In October 2018, the shares reserved for issuance under the 2013 Stock Option Plan were increased by 104,164,202 shares to a total of 123,000,000 shares.

In October 2018, the Company cancelled outstanding stock options previously granted to certain executive officers of the Company at exercise prices ranging from $0.11 to $0.29 per share and granted certain employees and executive officers of the Company options to purchase an aggregate of 116,990,601 shares of common stock at an exercise price of $0.0014 per share.

2017 Term Loan

In December 2018, the Company drew down the remaining $5.0 million available under the 2017 Term Loan agreement and issued Innovatus warrants to purchase 3,846,154 shares of Series F redeemable convertible preferred stock at an exercise price of $0.078 per share.

Janssen Promotion Agreement

In December 2018, the Company entered into a co-promotion agreement with Janssen, or the Janssen agreement, to co-promote SIMPONI® in the United States. The Company is responsible for the costs associated with its sales force over the course of such co-promotion. Janssen is responsible for all other aspects of the commercialization of SIMPONI® under the Janssen agreement. In exchange for the Company's sales and co-promotional services, the Company is entitled to a quarterly co-promotion fee based on any increase in total prescribed units of SIMPONI® for that quarter over a predetermined baseline. The promotion fee is determined on a sliding rate, ranging from the high hundreds of dollars to the low one thousands per prescribed unit of SIMPONI®, depending on the number of increased prescriptions, and varies per increased prescription. In addition, during the term of the Janssen agreement, the Company is restricted from promoting any other biologic or JAK inhibitor used for the treatment of indications covered by the agreement without first obtaining Janssen's written consent.

The term of the Janssen agreement expires on June 30, 2020, unless extended by the Company for an additional 18 months upon 180 days written notice prior to the end of the initial term. Janssen can terminate the agreement at any time for any reason upon 30 days' notice to the Company, and the Company can terminate the agreement for any reason at the end of any calendar quarter upon 30 days' notice to Janssen. Either party may terminate the agreement in the event of the other party's default of any of its material obligations under the agreement if such default remains uncured for a specified period of time following receipt of written notice of such default.

Restated Certificate of Incorporation

On January 2, 2019, the Company amended and restated its restated certificate of incorporation to, among other things, (i) increase its authorized shares of common stock from 1,470,000,000 to 1,675,200,000 shares, (ii) increase its authorized shares of convertible preferred stock from 750,300,000 to 955,500,000 shares, of which 205,200,000 shares are designated as Series G convertible preferred stock, and (iii) set forth the rights, preferences and privileges of the Series G convertible preferred stock.

Exagen Inc.

Notes to Financial Statements

Sale of Series G Redeemable Convertible Preferred Stock

In January 2019, the Company sold 88,030,905 shares of its Series G redeemable convertible preferred stock for aggregate gross proceeds of approximately $6.9 million to new and existing investors.

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PROSPECTUS

Joint Book-running Managers

Cowen **Cantor** **William Blair**

, 2019

Part II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the Securities and Exchange Commission, or the SEC, registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and the Nasdaq Global Market listing fee.

	Amount paid or to be paid
SEC registration fee	$ *
FINRA filing fee	*
Nasdaq Global Market listing fee	*
Accountants' fees and expenses	*
Legal fees and expenses	*
Blue Sky fees and expenses	*
Transfer Agent's fees and expenses	*
Printing and engraving expenses	*
Miscellaneous	*
Total expenses	$ *

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers.

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our certificate of incorporation provides that no director of the Registrant shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, provides that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our amended and restated certificate of incorporation provides that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We have entered into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act of 1933, as amended, or Securities Act, against certain liabilities.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding shares of capital stock issued by us since January 1, 2016. Also included is the consideration received by us for such shares and information relating to the section of the Securities Act, or rule of the SEC, under which exemption from registration was claimed.

(a) Sales of Capital Stock, Warrants to Purchase Capital Stock and Convertible Promissory Notes

1. In 2015, we issued a variable number of warrants, which became a fixed and immediately exercisable warrant to purchase 2,688,181 shares of our Series E redeemable convertible preferred stock at an exercise price of $0.25 per share as a result of the issuance of our Series E redeemable convertible preferred stock in January 2016.
2. In January 2016 and March 2016, we issued an aggregate of 166,550,058 shares of our Series E redeemable convertible preferred stock at a purchase price of $0.25 per share and warrants to purchase 166,813,448 shares of our common stock, for (i) aggregate consideration of approximately $9.3 million in cash, (ii) the cancellation of the outstanding principal and accrued interest on previously outstanding convertible promissory notes issued in February 2015, July 2015 and October 2015, which totaled $4.9 million, $3.2 million, and $3.5 million, respectively, and (iii) the exchange of 105,610, 41,509,393, 7,112,819, and 34,415,512, of previously outstanding shares of our Series A-3, Series B-3, Series C, and Series D redeemable convertible preferred stock, respectively, previously held by investors.
3. From June 2016 to April 2017, we sold an aggregate of approximately $9.8 million of convertible promissory notes. In May 2017, these convertible promissory notes were converted into an aggregate of 163,785,334 shares of our Series F redeemable convertible preferred stock.
4. From May 2017 to January 2018, we issued an aggregate or 339,484,788 shares of our Series F redeemable convertible preferred stock at a purchase price of $0.078 per share, for (i) aggregate consideration of approximately $13.7 million in cash and (ii) the cancellation of the outstanding principal and accrued interest on the outstanding convertible promissory notes issued in 2016 and 2017, which totaled approximately $9.8 million in the aggregate.
5. In September 2017 and December 2018, in connection with the execution of the loan and security agreement with Innovatus Life Sciences Lending Fund I, LP, we issued warrants to purchase an aggregate of 19,230,769 shares of our Series F redeemable convertible preferred stock at an exercise price of $0.078 per share.
6. In January 2019, we issued an aggregate of 88,030,905 shares of our Series G redeemable convertible preferred stock at a purchase price of $0.078 per share, for aggregate consideration of approximately $6.9 million in cash.

(b) Grants and Exercise of Stock Options

1. Since January 1, 2016, we granted stock options to purchase an aggregate of 118,290,601 shares of our common stock at a weighted-average exercise price of $0.002 per share, to certain of our employees, consultants and directors in connection with services provided to us by such persons. Of these, no options to purchase shares of our common stock have been exercised through December 31, 2018.

No underwriters were involved in the foregoing issuances of securities. The securities described in this section (a) of Item 15 were issued to investors in reliance upon the exemption from the registration requirements of the Securities Act, as set forth in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder relative to transactions by an issuer not involving any public offering, to the extent an exemption from such registration was required. All holders of securities described above represented to us in connection with their purchase or issuance that they were accredited investors and were acquiring the securities for their own account for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time. The

holders received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration statement or an available exemption from such registration.

The stock options and the common stock issuable upon the exercise of such options as described in this section (b) of Item 15 were issued pursuant to written compensatory plans or arrangements with our employees and directors, in reliance on the exemption from the registration requirements of the Securities Act provided by Rule 701 promulgated under the Securities Act or the exemption set forth in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder relative to transactions by an issuer not involving any public offering. All recipients either received adequate information about us or had access, through employment or other relationships, to such information.

All of the foregoing securities are deemed restricted securities for purposes of the Securities Act. All certificates representing the issued shares of capital stock described in this Item 15 included appropriate legends setting forth that the securities had not been registered and the applicable restrictions on transfer.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits. See Exhibit Index attached to this registration statement, which is incorporated by reference herein.

(b) Financial Statement Schedules. Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriter, at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Exhibit Index

Exhibit Number	Description of Exhibit
1.1*	Form of Underwriting Agreement.
3.1	Amended and Restated Certificate of Incorporation (currently in effect).
3.2	Bylaws (currently in effect).
3.3*	Form of Amended and Restated Certificate of Incorporation (to be effective immediately prior to the completion of this offering).
3.4*	Form of Amended and Restated Bylaws (to be effective immediately prior to the completion of this offering).
4.1*	Specimen stock certificate evidencing the shares of common stock.
4.2*	Amended and Restated Investors' Rights Agreement, dated January 2, 2019, by and among the Registrant and certain of its stockholders.
4.3*	Amended and Restated Stockholders' Agreement, dated January 2, 2019, by and among the Registrant and certain of its stockholders.
4.4	Form of Common Stock Purchase Warrant issued to investors by the Registrant in connection with private placement financings.
4.5	Form of Preferred Stock Purchase Warrant issued to Capital Royalty Partners and related advisors by the Registrant in connection with the Term Loan Agreement, by and between Capital Royalty Partners II L.P., Capital Royalty Partners II—Parallel Fund "A" L.P., Parallel Investment Opportunities Partners II L.P. and the Registrant.
4.6	Form of Warrant to Purchase Shares of Preferred Stock issued to investors by the Registrant in October 2015.
4.7	Amendment to Convertible Promissory Notes and Warrants, dated January 19, 2016.
4.8	Form of Common Stock Purchase Warrant to purchase common stock issued to investors by the Registrant in 2016.
4.9	Form of Warrant to Purchase Stock issued to Innovatus Life Sciences Lending Fund I, LP in connection with the Registrant's 2018 loan agreement.
5.1*	Opinion of Latham & Watkins LLP.
10.1#	Exagen Corporation 2002 Stock Option Plan, as amended, and form of option agreement thereunder.
10.2#	Exagen Diagnostics, Inc. 2013 Stock Option Plan, as amended, and form of option agreement thereunder.
10.3#*	Exagen Inc. 2019 Incentive Award Plan and form of option agreement thereunder.
10.4#*	Exagen Inc. 2019 Employee Stock Purchase Plan.
10.5†	License Agreement, dated September 13, 2007, by and between Prometheus Laboratories Inc. and the Registrant (as successor in interest to Proprius, Inc.).
10.6†	First Amendment to License Agreement, dated October 23, 2013, by and between Prometheus Laboratories Inc. and the Registrant (as successor in interest to Cypress Bioscience, Inc.).
10.7	Asset Purchase Agreement, dated February 9, 2009, by and between the Registrant (as successor in interest to Cypress Bioscience, Inc.) and Cellatope Corporation.
10.8	Amendment No. One to Asset Purchase Agreement, dated December 14, 2012, by and between the Registrant and Cellatope Corporation.
10.9	Amendment No. Two to Asset Purchase Agreement, dated January 11, 2017, by and between the Registrant and Cellatope Corporation.

Exhibit Number	Description of Exhibit
10.10†	Asset Purchase Agreement, dated October 8, 2010, by and between Cypress Bioscience, Inc., Proprius, Inc. and the Registrant.
10.11†	Amendment No. One to Asset Purchase Agreement, dated March 10, 2011, by and between Cypress Bioscience, Inc., Proprius, Inc. and the Registrant.
10.12†	Amendment No. Two to Asset Purchase Agreement, dated August 21, 2012, by and between Royalty Pharma Collection Trust, Proprius, Inc. and the Registrant.
10.13†	Amendment No. Three to Asset Purchase Agreement, dated February 6, 2013, by and between Royalty Pharma Collection Trust, Proprius, Inc. and the Registrant.
10.14	Amendment No. Four to Asset Purchase Agreement, dated October 8, 2013, by and between Royalty Pharma Collection Trust, Proprius, Inc. and the Registrant.
10.15	Amendment No. Five to Asset Purchase Agreement, dated January 26, 2016, by and between Royalty Pharma Collection Trust, Proprius, Inc. and the Registrant.
10.16†	Amendment No. Six to Asset Purchase Agreement, dated February 16, 2017, by and between Royalty Pharma Collection Trust, Proprius, Inc. and the Registrant.
10.17†	Amended and Restated Exclusive License Agreement, dated August 2, 2011, by and between the University of Pittsburgh —Of the Commonwealth System of Higher Education and the Registrant.
10.18†	First Amendment to Amended and Restated Exclusive License Agreement, dated May 17, 2012, by and between the University of Pittsburgh—Of the Commonwealth System of Higher Education and the Registrant.
10.19†	Second Amendment to Amended and Restated Exclusive License Agreement, dated September 30, 2013, by and between the University of Pittsburgh—Of the Commonwealth System of Higher Education and the Registrant.
10.20†	Third Amendment to Amended and Restated Exclusive License Agreement, dated June 24, 2016, by and between the University of Pittsburgh—Of the Commonwealth System of Higher Education and the Registrant.
10.21†	Exclusive License Agreement, dated September 30, 2013, by and between the University of Pittsburgh—Of the Commonwealth System of Higher Education and the Registrant.
10.22†	Exclusive License Agreement, dated September 5, 2011, by and between Thierry Dervieux, Ph.D. and the Registrant.
10.23†	Co-Promotion Agreement, dated December 10, 2018, by and between Janssen Biotech, Inc. and the Registrant.
10.24	Standard Industrial/Commercial Multi-Tenant Lease, dated January 13, 2012, by and between RGS Properties and the Registrant.
10.25	First Amendment to Standard Industrial/Commercial Multi-Tenant Lease, dated December 1, 2013, by and between RGS Properties and the Registrant.
10.26	Lease, dated May 7, 2013, by and between The Regents of the University of New Mexico and the Registrant.
10.27	First Amendment to Lease, dated May 7, 2013, by and between The Regents of the University of New Mexico and the Registrant.
10.28	Second Amendment to Lease, dated May 7, 2013, by and between The Regents of the University of New Mexico and the Registrant.

Exhibit Number	Description of Exhibit
10.29	Third Amendment to Lease, dated May 7, 2013, by and between The Regents of the University of New Mexico and the Registrant.
10.30	Standard Industrial/Commercial Single-Tenant Lease, dated September 4, 2014, by and between Geiger Court, LLC and the Registrant.
10.31	Master Lease Agreement, dated February 1, 2018, by and between Celtic Commercial Finance, a division of MB Equipment Finance, LLC and the Registrant.
10.32	Loan and Security Agreement, dated September 7, 2017, by and between Innovatus Life Sciences Lending Fund I, LP and the Registrant.
10.33#	Offer Letter, dated October 12, 2010, by and between Thierry Dervieux, Ph.D. and the Registrant, as amended on September 9, 2011.
10.34*	Form of Indemnification Agreement for Directors and Officers.
10.35#*	Non-Employee Director Compensation Program.
16.1*	Letter regarding change in certifying accountant.
23.1*	Consent of BDO USA, LLP, independent registered public accounting firm.
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

* To be filed by amendment.

† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment pursuant to Rule 406 under the Securities Act of 1933, as amended.

# Indicates management contract or compensatory plan.

Table of Contents

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Vista, State of California, on this day of , 2019.

EXAGEN INC.

By: _____
Fortunato Ron Rocca
President and Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Exagen Inc., hereby severally constitute and appoint Fortunato Ron Rocca and Kamal Adawi, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities held on the dates indicated.

Signature	Title	Date
_____ Fortunato Ron Rocca	President, Chief Executive Officer and Director (Principal Executive Officer)	, 2019
_____ Kamal Adawi	Chief Financial Officer and Corporate Secretary (Principal Financial and Accounting Officer)	, 2019
_____ Brian Birk	Chairman of the Board of Directors	, 2019
_____ Dan Burrell	Director	, 2019
_____ Ebetuel Pallares, Ph.D.	Director	, 2019
_____ James L.L. Tullis	Director	, 2019
_____ Arthur Weinstein, M.D.	Director	, 2019

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
EXAGEN DIAGNOSTICS, INC.

It is hereby certified that:

FIRST: The present name of the corporation is Exagen Diagnostics, Inc. (hereinafter called the "Corporation"), which is the name under which the Corporation was originally incorporated; and the date of filing of the Corporation's original Certificate of Incorporation with the Secretary of State of the State of Delaware was November 17, 2003.

SECOND: The Certificate of Incorporation of the Corporation is hereby amended and restated to read as follows:

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
EXAGEN INC.

ARTICLE FIRST
NAME

The name of the Corporation is Exagen Inc. (the "Corporation").

ARTICLE SECOND
REGISTERED OFFICE AND AGENT

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, city of Wilmington, County of New Castle, State of Delaware, 19801. The name of the Corporation's registered agent at such address is The Corporation Trust Company.

ARTICLE THIRD
PURPOSE

The purposes for which the Corporation is formed are to engage in any lawful act or activity for which corporations may be organized under the Delaware General Corporation Law and to possess and exercise all of the powers and privileges granted by such law and any other law of Delaware.

ARTICLE FOURTH
CAPITAL STOCK

A. The Corporation is authorized to issue two classes of stock: Common Stock and Preferred Stock. The total number of shares which the Corporation may issue is 2,630,700,000 shares, of which:

(i) 1,400,000 shares are Series A-3 Convertible Preferred Stock and of a par value of one-thousandth of one cent ($0.001) each (hereinafter referred to as the "Series A-3 Preferred Stock");

(ii) 3,100,000 shares are Series B-3 Convertible Preferred Stock and of a par value of one-thousandth of one cent ($0.001) each (hereinafter referred to as the "Series B-3 Preferred Stock");

(iii) 16,700,000 shares are Series C Convertible Preferred Stock and of a par value of one-thousandth of one cent ($0.001) each (hereinafter referred to as the "Series C Preferred Stock");

(iv) 9,800,000 shares are Series D Convertible Preferred Stock and of a par value of one-thousandth of one cent ($0.001) each (hereinafter referred to as the "Series D Preferred Stock");

(v) 169,300,000 shares are Series E Convertible Preferred Stock and of a par value of one-thousandth of one cent ($0.001) each (hereinafter referred to as the "Series E Preferred Stock");

(vi) 550,000,000 shares are Series F Convertible Preferred Stock and of a par value of one-thousands of one cent ($0.001) each (hereinafter referred to as the "Series F Preferred Stock");

(vii) 205,200,000 shares are Series G Convertible Preferred Stock and of a par value of one-thousands of one cent ($0.001) each (hereinafter referred to as the "Series G Preferred Stock"); and

(viii) 1,675,200,000 shares are Common Stock and of a par value of one-thousandth of one cent ($0.001) each (hereinafter referred to as the "Common Stock").

The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares of Common Stock then outstanding) by the affirmative vote of the holders of a majority of the outstanding stock of the Corporation entitled to vote (voting together on an as-if-converted basis).

B. Following the filing of this Amended and Restated Certificate of Incorporation, the rights, preferences, privileges, restrictions and other matters relating to the Preferred Stock are as set forth in this Part B.

ARTICLE 1
DEFINITIONS

For purposes of this Part B, the following definitions shall apply:

"Additional Shares of Common Stock" shall mean all shares of Common Stock issued (or, pursuant to Section 4.4(b), deemed to be issued) by the Corporation on or after the Filing Date, other than (i) shares of Series G Preferred Stock issued pursuant to the Series G

Preferred Stock Purchase Agreement and (ii) shares of Common Stock issued or issuable (or so deemed to be issued):

(a) upon conversion of shares of Preferred Stock;

(b) upon the exercise of warrants outstanding as of the Filing Date to purchase 171,695,348 shares of Common Stock;

(c) to officers, directors or employees of, or consultants to, the Corporation for up to 123,000,000 shares of Common Stock pursuant to any stock option, incentive, bonus or compensation program approved by the Board of Directors;

(d) by way of dividend or other distribution on shares of Preferred Stock; or

(e) for which adjustment is made in the Conversion Price pursuant to Section 4.4(e) or (f).

"Conversion Date" shall have the meaning set forth in Section 4.3.

"Conversion Price" shall mean the price at which shares of Common Stock shall be deliverable upon conversion, which shall initially be equal to (a) with respect to a share of Series A-3 Preferred Stock, $7.50, (b) with respect to a share of Series B-3 Preferred Stock, $0.078, (c) with respect to a share of Series C Preferred Stock, $0.078, (d) with respect to a share of Series D Preferred Stock, $0.078, (e) with respect to a share of Series E Preferred Stock, $0.078, (f) with respect to a share of Series F Preferred Stock, $0.078, and (g) with respect to a share of Series G Preferred Stock, $0.078, in each case subject to appropriate and proportionate adjustments for any stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to, such shares, as applicable, and further subject to adjustment (in order to adjust the number of shares of Common Stock into which such Preferred Stock is convertible) as provided in Section 4.4.

"Conversion Rights" shall have the meaning set forth in Section 4.

"Convertible Securities" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exercisable or exchangeable for Common Stock.

"Filing Date" means the date of the filing of this Amended and Restated Certificate of Incorporation.

"Liquidation" shall have the meaning set forth in Section 3.2.

"Liquidation Preference" shall mean:

(a) with respect to a share of Series A-3 Preferred Stock, the Liquidation Value specified for such share of Series A-3 Preferred Stock;

(b) with respect to a share of Series B-3 Preferred Stock, the sum of (i) Liquidation Value for such share of Series B-3 Preferred Stock, plus (ii) an amount equal to any other dividends then declared but unpaid thereon;

(c) with respect to a share of Series C Preferred Stock, the sum of (i) the product obtained by multiplying (x) the Liquidation Value for such share of Series C Preferred Stock times (y) two (2), plus (ii) an amount equal to any other dividends then declared but unpaid thereon;

(d) with respect to a share of Series D Preferred Stock, the sum of (i) the product obtained by multiplying (x) the Liquidation Value for such share of Series D Preferred Stock times (y) one and one-half (1.5), plus (ii) an amount equal to any other dividends then declared but unpaid thereon;

(e) with respect to a share of Series E Preferred Stock, the sum of (i) the product obtained by multiplying (x) the Liquidation Value for such share of Series E Preferred Stock times (y) one and one-half (1.5), plus (ii) an amount equal to any other dividends then declared but unpaid thereon;

(f) with respect to a share of Series F Preferred Stock, the sum of (i) the product obtained by multiplying (x) the Liquidation Value for such share of Series F Preferred Stock times (y) three (3), plus (ii) an amount equal to any other dividends then declared but unpaid thereon; and

(g) with respect to a share of Series G Preferred Stock, the sum of (i) the product obtained by multiplying (x) the Liquidation Value for such share of Series G Preferred Stock times (y) one and one-half (1.5), plus (ii) an amount equal to any other dividends then declared but unpaid thereon.

"Liquidation Value" shall mean (a) with respect to a share of Series A-3 Preferred Stock $7.50, (b) with respect to a share of Series B-3 Preferred Stock, $0.25, (c) with respect to a share of Series C Preferred Stock, $0.25, (d) with respect to a share of Series D Preferred Stock, $0.25, (e) with respect to a share of Series E Preferred Stock, $0.25, (f) with respect to a share of Series F Preferred Stock, $0.078, and (g) with respect to a share of Series G Preferred Stock, $0.078, in each case subject to appropriate and proportionate adjustments for any stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to, such shares, as applicable.

"Option" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire either Common Stock or Convertible Securities.

"Original Issue Price" shall mean (a) with respect to a share of Series A-3 Preferred Stock, $7.50, (b) with respect to a share of Series B-3 Preferred Stock, $0.25, (c) with respect to a share of Series C Preferred Stock, $0.25, (d) with respect to a share of Series D Preferred Stock, $0.25, (e) with respect to a share of Series E Preferred Stock, $0.25, (f) with respect to a share of Series F Preferred Stock, $0.078, and (g) with respect to a share of Series G Preferred Stock, $0.078, in each case subject to appropriate and proportionate adjustments for any stock dividends,

stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to, such shares, as applicable.

"Preferred Stock" shall mean the Series A-3 Preferred Stock, the Series B-3 Preferred Stock, the Series C Preferred Stock, the Series D Preferred Stock, the Series E Preferred Stock, the Series F Preferred Stock, and the Series G Preferred Stock, collectively.

"Redemption Date" shall mean the requested date of redemption pursuant to Section 6.1 or Section 6.2.

"Redemption Event" shall mean the failure by the Corporation to perform or observe any material provision of the Corporation's Amended and Restated Certificate of Incorporation or any one or more of the Series G Preferred Stock Purchase Agreement, the Amended and Restated Investors' Rights Agreement or the Amended and Restated Stockholders' Agreement, each dated on or about the Filing Date and as amended and/or restated from time to time, among the Corporation and certain of its stockholders, copies of which are on file and available for inspection at the office of the Corporation, unless such failure, if curable, is cured within a period of sixty (60) days, provided that the holders of at least 52% of the outstanding shares of Senior Preferred Stock, acting together as a single class, give to the Corporation a written notice of such redemption.

"Redemption Price" shall mean, (a) with respect to a share of Series B-3 Preferred Stock, an amount equal to the Liquidation Value for such share of Series B-3 Preferred Stock, (b) with respect to a share of Series C Preferred Stock, an amount equal to the product obtained by multiplying (i) the Liquidation Value for such share of Series C Preferred Stock times (ii) two (2), (c) with respect to a share of Series D Preferred Stock, an amount equal to the product obtained by multiplying (i) the Liquidation Value for such share of Series D Preferred Stock times (ii) one and one-half (1.5), (d) with respect to a share of Series E Preferred Stock, an amount equal to the product obtained by multiplying (i) the Liquidation Value for such share of Series E Preferred Stock times (ii) one and one-half (1.5), (e) with respect to a share of Series F Preferred Stock, an amount equal to the product obtained by multiplying (i) the Liquidation Value for such share of Series F Preferred Stock times (ii) three (3), and (f) with respect to a share of Series G Preferred Stock, an amount equal to the product obtained by multiplying (i) the Liquidation Value for such share of Series G Preferred Stock times (ii) one and one-half (1.5).

"Series E/F Liquidation Preference" shall have the meaning set forth in Section 3.1(b).

"Senior Preferred Stock" shall mean the Series B-3 Preferred Stock, the Series C Preferred Stock, the Series D Preferred Stock, the Series E Preferred Stock, the Series F Preferred Stock, and the Series G Preferred Stock, collectively.

"Series G Preferred Stock Purchase Agreement" shall mean that certain Series G Preferred Stock Purchase Agreement, dated on or about the Filing Date, among the Corporation and the other parties named therein, as amended and/or restated from time to time.

All references to Sections in this Article Fourth are references to Sections of this Article Fourth unless otherwise specifically set forth herein.

ARTICLE 2
DIVIDEND RIGHTS

Section 2.1. Series G Dividends.

(a) The outstanding shares of Series G Preferred Stock shall be entitled to receive dividends at a rate of $0.02 per share (the "Series G Dividends") (subject to appropriate and proportionate adjustments for stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to the Series G Preferred Stock) per annum, out of any assets at the time legally available therefor, when, as and if declared by the Board of Directors, prior and in preference to the payment of any dividends to the holders of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-3 Preferred Stock, Series A-3 Preferred Stock and the Common Stock. The Series G Dividends shall be payable only when, as and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Series G Dividends.

(b) The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable entirely in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Corporation's Amended and Restated Certificate of Incorporation) the holders of the Series G Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series G Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Series G Dividends on such share of Series G Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series G Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Series G Preferred Stock in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series G Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate and proportionate adjustments for any stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to, such shares) and (2) multiplying such fraction by an amount equal to the Original Issue Price for the Series G Preferred Stock; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series G Preferred Stock pursuant to this Section 2 shall be calculated based upon the dividend on the class or Series of capital stock that would result in the highest dividend being paid to the holders of the Series G Preferred Stock.

Section 2.2. Series F Dividends.

(a) The outstanding shares of Series F Preferred Stock shall be entitled to receive dividends, only after the payment of dividends to the holders of Series G Preferred Stock pursuant to Section 2.1 above, at a rate of $0.02 per share (the "Series F Dividends") (subject to

appropriate and proportionate adjustments for stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to the Series F Preferred Stock) per annum, out of any assets at the time legally available therefor, when, as and if declared by the Board of Directors, prior and in preference to the payment of any dividends to the holders of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-3 Preferred Stock, Series A-3 Preferred Stock and the Common Stock. The Series F Dividends shall be payable only when, as and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Series F Dividends.

(b) The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable entirely in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Corporation's Amended and Restated Certificate of Incorporation) the holders of the Series F Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series F Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Series F Dividends on such share of Series F Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series F Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Series F Preferred Stock in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series F Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate and proportionate adjustments for any stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to, such shares) and (2) multiplying such fraction by an amount equal to the Original Issue Price for the Series F Preferred Stock; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series F Preferred Stock pursuant to this Section 2 shall be calculated based upon the dividend on the class or Series of capital stock that would result in the highest dividend being paid to the holders of the Series F Preferred Stock.

Section 2.3. Series E Dividends.

(a) The outstanding shares of Series E Preferred Stock shall be entitled to receive dividends, only after the payment of dividends to the holders of Series G Preferred Stock pursuant to Section 2.1 above and to the holders of Series F Preferred Stock pursuant to Section 2.2 above, at a rate of $0.02 per share (the "Series E Dividends") (subject to appropriate and proportionate adjustments for stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to the Series E Preferred Stock) per annum, out of any assets at the time legally available therefor, when, as and if declared by the Board of Directors, prior and in preference to the payment of any dividends to the holders of Series D Preferred Stock, Series C Preferred Stock, Series B-3 Preferred Stock, Series A-3 Preferred Stock and the Common Stock. The Series E Dividends shall be payable only when, as

and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Series E Dividends.

(b) The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable entirely in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Corporation's Amended and Restated Certificate of Incorporation) the holders of the Series E Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series E Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Series E Dividends on such share of Series E Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series E Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Series E Preferred Stock in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series E Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate and proportionate adjustments for any stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to, such shares) and (2) multiplying such fraction by an amount equal to the Original Issue Price for the Series E Preferred Stock; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series E Preferred Stock pursuant to this Section 2 shall be calculated based upon the dividend on the class or Series of capital stock that would result in the highest dividend being paid to the holders of the Series E Preferred Stock.

Section 2.4. Series D Dividends.

(a) The outstanding shares of Series D Preferred Stock shall be entitled to receive dividends, only after the payment of dividends to the holders of Series G Preferred Stock pursuant to Section 2.1 above, to the holders of Series F Preferred Stock pursuant to Section 2.2 above and to the holders of Series E Preferred Stock pursuant to Section 2.3 above, at a rate of $0.02 per share (the "Series D Dividends") (subject to appropriate and proportionate adjustments for stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to the Series D Preferred Stock) per annum, out of any assets at the time legally available therefor, when, as and if declared by the Board of Directors, prior and in preference to the payment of any dividends to the holders of Series C Preferred Stock, Series B-3 Preferred Stock, Series A-3 Preferred Stock and the Common Stock. The Series D Dividends shall be payable only when, as and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Series D Dividends.

(b) The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable entirely in shares of Common Stock) unless (in addition to the

obtaining of any consents required elsewhere in the Corporation's Amended and Restated Certificate of Incorporation) the holders of the Series D Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series D Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Series D Dividends on such share of Series D Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series D Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Series D Preferred Stock in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series D Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate and proportionate adjustments for any stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to, such shares) and (2) multiplying such fraction by an amount equal to the Original Issue Price for the Series D Preferred Stock; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series D Preferred Stock pursuant to this Section 2 shall be calculated based upon the dividend on the class or Series of capital stock that would result in the highest dividend being paid to the holders of the Series D Preferred Stock.

Section 2.5. Series C Dividends.

(a) The outstanding shares of Series C Preferred Stock shall be entitled to receive dividends, only after the payment of dividends to the holders of Series G Preferred Stock pursuant to Section 2.1 above, to the holders of Series F Preferred Stock pursuant to Section 2.2 above, to the holders of Series E Preferred Stock pursuant to Section 2.3 above and to the holders of Series D Preferred Stock pursuant to Section 2.4 above, at a rate of $0.02 per share (the "Series C Dividends") (subject to appropriate and proportionate adjustments for stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to the Series C Preferred Stock) per annum, out of any assets at the time legally available therefor, when, as and if declared by the Board of Directors, prior and in preference to the payment of any dividends to the holders of Series B-3 Preferred Stock, Series A-3 Preferred Stock and the Common Stock. The Series C Dividends shall be payable only when, as and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Series C Dividends.

(b) The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable entirely in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Corporation's Amended and Restated Certificate of Incorporation) the holders of the Series C Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series C Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Series C Dividends on such share of Series C Preferred Stock and not previously paid and (ii) (A) in the

case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series C Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Series C Preferred Stock in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series C Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate and proportionate adjustments for any stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to, such shares) and (2) multiplying such fraction by an amount equal to the Original Issue Price for the Series C Preferred Stock; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series C Preferred Stock pursuant to this Section 2 shall be calculated based upon the dividend on the class or Series of capital stock that would result in the highest dividend being paid to the holders of the Series C Preferred Stock.

Section 2.6. Series B-3 Dividends.

(a) The outstanding shares of Series B-3 Preferred Stock shall be entitled to receive dividends, only after the payment of dividends to the holders of Series G Preferred Stock pursuant to Section 2.1 above, to the holders of Series F Preferred Stock pursuant to Section 2.2 above, to the holders of Series E Preferred Stock pursuant to Section 2.3 above, to the holders of Series D Preferred Stock pursuant to Section 2.4 above and to the holders of Series C Preferred Stock pursuant to Section 2.5 above, at a rate of $0.02 per share (the "Series B-3 Dividends") (subject to appropriate and proportionate adjustments for stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to the Series B-3 Preferred Stock) per annum, out of any assets at the time legally available therefor, when, as and if declared by the Board of Directors, prior and in preference to the payment of any dividends to the holders of Series A-3 Preferred Stock and the Common Stock. The Series B-3 Dividends shall be payable only when, as and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Series B-3 Dividends.

(b) The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable entirely in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Corporation's Amended and Restated Certificate of Incorporation) the holders of the Series B-3 Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series B-3 Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Series B-3 Dividends on such share of Series B-3 Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series B-3 Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Series B-3 Preferred Stock in each case

calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series B-3 Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate and proportionate adjustments for any stock dividends, stock splits and other subdivisions and combinations of, and recapitalizations and like occurrences with respect to, such shares) and (2) multiplying such fraction by an amount equal to the Original Issue Price for the Series B-3 Preferred Stock; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series B-3 Preferred Stock pursuant to this Section 2 shall be calculated based upon the dividend on the class or Series of capital stock that would result in the highest dividend being paid to the holders of the Series B-3 Preferred Stock.

Section 2.7. No Other Dividends.

No dividend shall be declared or be payable on the outstanding shares of the Series B-3 Preferred Stock without the consent of the holders of at least 53% of the outstanding shares of the Series C Preferred Stock, Series D Preferred Stock, Series E Preferred Stock, Series F Preferred Stock and Series G Preferred Stock, voting together as a single class, and no dividend shall be declared or be payable on the outstanding shares of the Series A-3 Preferred Stock or the Common Stock (other than a dividend on shares of Common Stock payable entirely in shares of Common Stock) without the consent of the holders of at least 52% of the outstanding shares of the Senior Preferred Stock. Nothing in this Section 2.7 shall preclude the payment of an amount equal to any Series B-3 Dividends as part of the Liquidation Preference or Redemption Price, as applicable, with respect to the Series B-3 Preferred Stock.

ARTICLE 3
LIQUIDATION RIGHTS

Section 3.1. Right to Liquidation Value.

(a) In the event of any Liquidation, either voluntary or involuntary, before any distribution or payment shall be made to the holders of any Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-3 Preferred Stock, Series A-3 Preferred Stock or Common Stock, each holder of Series G Preferred Stock shall be entitled to receive out of the assets of the Corporation legally available for distribution or payment (or the consideration received in a transaction which is a Liquidation), on account of each then-outstanding share of Series G Preferred Stock held by them, the Liquidation Preference specified for such share of Series G Preferred Stock. If, upon the Liquidation, the assets of the Corporation (or the consideration received in such transaction) shall be insufficient to make payment in full to all holders of the Series G Preferred Stock of the full Liquidation Preference of the Series G Preferred Stock, then such assets (or consideration) shall be distributed or paid among the holders of Series G Preferred Stock at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be respectively entitled.

(b) After the payment of the full Liquidation Preference of the Series G Preferred Stock as set forth in Section 3.1(a), and before any distribution or payment shall be made to the holders of any Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-3 Preferred Stock, Series A-3 Preferred Stock or Common Stock, each holder of Series F Preferred Stock shall be entitled to receive out of the assets of the Corporation legally available for distribution or payment (or the consideration received in a transaction which is a Liquidation), on account of each then-outstanding share of Series F Preferred Stock held by them, the Liquidation Preference specified for such share of Series F Preferred Stock. If, upon the Liquidation, the assets of the Corporation (or the consideration received in such transaction) shall be insufficient to make payment in full to all holders of the Series F Preferred Stock of the full Liquidation Preference of the Series F Preferred Stock, then such assets (or consideration) shall be distributed or paid among the holders of Series F Preferred Stock at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be respectively entitled.

(c) After the payment of the full Liquidation Preference of the Series G Preferred Stock as set forth in Section 3.1(a) and the full Liquidation Preference of the Series F Preferred Stock as set forth in Section 3.1(b), and before any distribution or payment shall be made to the holders of any Series D Preferred Stock, Series C Preferred Stock, Series B-3 Preferred Stock, Series A-3 Preferred Stock or Common Stock, each holder of Series F Preferred Stock and Series E Preferred Stock shall be entitled to receive out of the assets of the Corporation legally available for distribution or payment (or the consideration received in a transaction which is a Liquidation), on account of each then-outstanding share of Series F Preferred Stock and Series E Preferred Stock held by them with equal priority and in proportion to the Series E/F Liquidation Sharing Ratios (as defined below), the Liquidation Value for such share of Series F Preferred Stock and the Liquidation Preference specified for such share of Series E Preferred Stock (together, the "Series E/F Liquidation Preference") until such time as the holders of Series E Preferred Stock have received the full Liquidation Preference for such shares of Series E Preferred Stock. If, upon the Liquidation, the assets of the Corporation (or the consideration received in such transaction) shall be insufficient to make payment in full to all holders of the Series E Preferred Stock and Series F Preferred Stock of the full amounts they are entitled to under this Section 3.1(b), then such assets (or consideration) shall be distributed or paid among the holders of Series E Preferred Stock and the holders of the Series F Preferred Stock at the time outstanding with equal priority and in proportion to the full amounts to which they would otherwise be respectively entitled under this Section 3.1(b). For purposes of this Section 3.1(b), the "Series E/F Liquidation Sharing Ratios" shall mean, (i) with respect to a share of Series F Preferred Stock, a fraction, the numerator of which is the total aggregate purchase price received by the Company for the sale of shares of Series F Preferred Stock pursuant to the Series F Preferred Stock Purchase Agreement as of the date of any Liquidation, and the denominator of which is equal to the sum of (x) the total aggregate purchase price received by the Company for the sale of shares of Series F Preferred Stock pursuant to the Series F Preferred Stock Purchase Agreement as of the date of any Liquidation and (y) the aggregate amount of the full Liquidation Preference for all shares of the Series E Preferred Stock, or (ii) with respect to a share of Series E Preferred Stock, a fraction, the numerator of which is the aggregate amount of the full Liquidation Preference for all shares of the Series E Preferred Stock and the denominator of which is equal to the sum of (x) the total aggregate purchase price received by the Company for the sale of shares of Series F Preferred Stock pursuant to the Series F Preferred Stock Purchase Agreement as of the date of any Liquidation, and (y) the aggregate amount of the full Liquidation Preference for all shares of the Series E Preferred Stock.

(d) After the payment of the full Liquidation Preference of the Series G Preferred Stock as set forth in Section 3.1(a), the full Liquidation Preference of the Series F Preferred Stock as set forth in Section 3.1(b) and the full Series E/F Liquidation Preference (including the full Liquidation Preference of the Series E Preferred Stock) as set forth in Section 3.1(c), and before any distribution or payment shall be made to the holders of any Series C Preferred Stock, Series B-3 Preferred Stock, Series A-3 Preferred Stock or Common Stock, each holder of Series D Preferred Stock shall be entitled to receive out of the assets of the Corporation legally available for distribution or payment (or the consideration received in a transaction which is a Liquidation), on account of each then-outstanding share of Series D Preferred Stock held by them, the Liquidation Preference specified for such share of Series D Preferred Stock. If, upon the Liquidation, the assets of the Corporation (or the consideration received in such transaction) shall be insufficient to make payment in full to all holders of the Series D Preferred Stock of the full Liquidation Preference of the Series D Preferred Stock, then such assets (or consideration) shall be distributed or paid among the holders of Series D Preferred Stock at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be respectively entitled.

(e) After the payment of the full Liquidation Preference of the Series G Preferred Stock as set forth in Section 3.1(a), the full Liquidation Preference of the Series F Preferred Stock as set forth in Section 3.1(b), the full Series E/F Liquidation Preference (including the full Liquidation Preference of the Series E Preferred Stock) as set forth in Section 3.1(c), and the full Liquidation Preference of the Series D Preferred Stock as set forth in Section 3.1(d), and before any distribution or payment shall be made to the holders of any Series B-3 Preferred Stock, Series A-3 Preferred Stock or Common Stock, the holders of Series C Preferred Stock shall be entitled to receive out of the assets of the Corporation legally available for distribution or payment (or the consideration received in a transaction which is a Liquidation), on account of each then-outstanding share of Series C Preferred Stock held by them, the Liquidation Preference specified for such share of Series C Preferred Stock. If, upon the Liquidation, the assets of the Corporation (or the consideration received in such transaction) shall be insufficient to make payment in full to all holders of the Series C Preferred Stock of the full Liquidation Preference of the Series C Preferred Stock, then such assets (or consideration) shall be distributed or paid among the holders of Series C Preferred Stock at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be respectively entitled.

(f) After the payment of the full Liquidation Preference of the Series G Preferred Stock as set forth in Section 3.1(a), the full Liquidation Preference of the Series F Preferred Stock as set forth in Section 3.1(b), the full Series E/F Liquidation Preference (including the full Liquidation Preference of the Series E Preferred Stock) as set forth in Section 3.1(c), the full Liquidation Preference of the Series D Preferred Stock as set forth in Section 3.1(d) and the full Liquidation Preference of the Series C Preferred Stock as set forth in Section 3.1(e), and before any distribution or payment shall be made to the holders of any Series A-3 Preferred Stock or Common Stock, the holders of Series B-3 Preferred Stock shall be entitled to receive out of the assets of the Corporation legally available for distribution or payment (or the consideration received in such transaction), on account of each then-outstanding share of Series B-3 Preferred Stock held by them, the Liquidation Preference specified for such share of Series B-3 Preferred Stock. If the assets of the Corporation shall be insufficient to make payment in full to all holders of the Series B-3 Preferred Stock of the full Liquidation Preference of the Series B-3 Preferred Stock, then such assets (or consideration) shall be distributed or paid among the holders of

Series B-3 Preferred Stock at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be respectively entitled.

(g) After the payment of the full Liquidation Preference of the Series G Preferred Stock as set forth in Section 3.1(a), the full Liquidation Preference of the Series F Preferred Stock as set forth in Section 3.1(b), the full Series E/F Liquidation Preference (including the full Liquidation Preference of the Series E Preferred Stock) as set forth in Section 3.1(c), the full Liquidation Preference of the Series D Preferred Stock as set forth in Section 3.1(d), the full Liquidation Preference of the Series C Preferred Stock as set forth in Section 3.1(e) and the full Liquidation Preference of the Series B-3 Preferred Stock as set forth in Section 3.1(f), and before any distribution or payment shall be made to the holders of any Common Stock, the holders of Series A-3 Preferred Stock shall be entitled to receive out of the assets of the Corporation legally available for distribution or payment (or the consideration received in such transaction), on account of each then-outstanding share of Series A-3 Preferred Stock held by them, the Liquidation Preference specified for such share of Series A-3 Preferred Stock. If the assets of the Corporation shall be insufficient to make payment in full to all holders of the Series A-3 Preferred Stock of the full Liquidation Preference of the Series A-3 Preferred Stock, then such assets (or consideration) shall be distributed or paid among the holders of Series A-3 Preferred Stock at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be respectively entitled.

(h) After the payment of the full Liquidation Preference of the Preferred Stock as set forth in Sections 3.1(a), 3.1(b), 3.1(c), 3.1(d), 3.1(e), 3.1(f) and 3.1(g) above, all of the remaining assets of the Corporation (or consideration received in such transaction) shall be distributed or paid with equal priority and *pro rata* among the holders of the then outstanding Preferred Stock and holders of the then outstanding Common Stock in proportion to the number of shares of Common Stock then held by such holders, treating in such circumstances each then outstanding share of Preferred Stock as if it had been converted into Common Stock at the then applicable Conversion Price.

Section 3.2. "Liquidation" Defined. Each of the following events shall be considered a "Liquidation":

(a) any liquidation, dissolution or winding up, either voluntary or involuntary, of the Corporation;

(b) a statutory share exchange, reorganization, merger or consolidation of the Corporation with or into any other entity or entities or any other transaction or series of related transactions (but excluding any sale of stock by the Corporation for capital raising purposes), as a result of which stockholders of the Corporation immediately prior to the consummation of the statutory share exchange, reorganization, merger, consolidation, transaction or series of related transactions hold less than 50% of the voting securities of the surviving entity or the entity whose securities are issued pursuant thereto or hold greater than 50% of the voting securities of the surviving entity or the entity whose securities are issued pursuant thereto but in proportions that are not substantially equivalent to the proportions in which such stockholders held the Corporation's voting securities immediately prior to such transaction; or

(c) a sale, lease, license or other disposition of all or substantially all of the assets of the Corporation (whether held directly or indirectly through one or more controlled subsidiaries) by means of any transaction or series of related transactions.

Section 3.3. Preferential Payment. All of the preferential amounts to be paid to the holders of the Preferred Stock pursuant to this Section 3 shall be paid or set apart in trust for payment before the payment or setting apart for payment of any amount for, or the distribution of any assets of the Corporation (or compensation received in the transaction) to, the holders of the Common Stock in connection with such Liquidation.

Section 3.4. Allocation of Escrow or Contingent Payment. In the event of any transaction or event constituting a Liquidation pursuant to Section 3.2(b), if any portion of the consideration payable to the Corporation or its stockholders is placed into escrow and/or is payable to the Corporation or its stockholders at a future date and/or subject to contingencies, the definitive agreements shall provide that (a) the portion of such consideration that is not payable at a future date, not placed in escrow and not subject to any contingencies (the "Initial Consideration") shall be allocated among the holders of capital stock of the Corporation in accordance with Section 3.1 as if the Initial Consideration were the only consideration payable in connection with such Liquidation and (b) any additional consideration which becomes payable to the Corporation or its stockholders upon release from escrow or satisfaction of contingencies or otherwise shall be allocated among the holders of capital stock of the Corporation in accordance with Section 3.1 after taking into account the previous payment of the Initial Consideration as part of the same transaction. In the event of a Liquidation pursuant to Section 3.2(a) or Section 3.2(c), if any portion of the consideration payable pursuant to such Liquidation is placed into escrow, is payable at a future date and/or is payable subject to contingencies, then (x) the portion of the consideration that is not payable at a future date, not placed into escrow and not subject to any contingencies (the "Non-Contingent Consideration") shall be distributed to the holders of the capital stock of the Corporation in accordance with Section 3.1 as if such Non-Contingent Consideration were the only consideration payable in connection with such Liquidation and (y) any additional consideration which becomes payable upon release from escrow or satisfaction of contingencies or otherwise shall be paid or distributed to the in accordance with Section 3.1 after taking into account the previous payment of the Non-Contingent Consideration as part of the same transaction.

ARTICLE 4
CONVERSION RIGHTS

The holders of the Preferred Stock shall have conversion rights as follows (the "Conversion Rights"):

Section 4.1. Right to Convert. Each share of Preferred Stock shall be convertible at the option of the holder thereof at any time and without the payment of any additional consideration therefor into that number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price for such share of Preferred Stock by the then effective Conversion Price (determined as hereinafter provided) in effect at the time of conversion.

Section 4.2. Mandatory Conversion. Each share of Preferred Stock shall automatically be converted into that number of fully paid and nonassessable shares of Common

Stock as is determined by dividing the Original Issue Price for such share of Preferred Stock by the then effective Conversion Price for such Preferred Stock, as adjusted pursuant to Section 4.4, upon (a) the affirmative vote or written consent of the holders of at least 52% of the then outstanding shares of Preferred Stock, voting together as a single class, or (b) the closing of a firmly underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of Common Stock for the account of the Corporation to the public in which the Corporation actually receives net proceeds of at least $30,000,000 (after deduction of underwriters' discounts and commissions), at a minimum valuation of $130,000,000, and following which the Common Stock of the Corporation is traded or listed for quotation on a nationally recognized United States stock exchange; provided, that the conversion provided for in this Section 4.2(b) shall be conditioned upon the closing of the sale of securities pursuant to such offering and the person(s) entitled to receive the Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of the sale of such securities. In any case where a particular series of Preferred Stock is to be converted (and expressly excluding the case where all Preferred Stock is to be converted in accordance with the immediately preceding sentence) then, and only then, shall the following thresholds apply: (t) each outstanding share of Series A-3 Preferred Stock shall automatically be converted into shares of Common Stock at the then effective Conversion Price for such share immediately upon the affirmative vote or written consent of the holders of at least 50% of the then-outstanding Series A-3 Preferred Stock (voting as a single class), (u) each outstanding share of Series B-3 Preferred shall automatically be converted into shares of Common Stock at the then effective Conversion Price for such share immediately upon the affirmative vote or written consent of the holders of at least 50% of the then outstanding Series B-3 Preferred (voting as a single class), (v) each outstanding share of Series C Preferred Stock shall automatically be converted into shares of Common Stock at the then effective Conversion Price for such share immediately upon the affirmative vote or written consent of the holders of at least 50% of the then outstanding Series C Preferred Stock (voting as a single class), (w) each outstanding share of Series D Preferred Stock shall automatically be converted into shares of Common Stock at the then effective Conversion Price for such share immediately upon the affirmative vote or written consent of the holders of at least 50% of the then outstanding Series D Preferred Stock (voting as a single class), (x) each outstanding share of Series E Preferred Stock shall automatically be converted into shares of Common Stock at the then effective Conversion Price for such share immediately upon the affirmative vote or written consent of the holders of at least 56% of the then outstanding Series E Preferred Stock (voting as a single class), (y) each outstanding share of Series F Preferred Stock shall automatically be converted into shares of Common Stock at the then effective Conversion Price for such share immediately upon the affirmative vote or written consent of the holders of at least 50% of the then outstanding Series F Preferred Stock (voting as a single class), and (z) each outstanding share of Series G Preferred Stock shall automatically be converted into shares of Common Stock at the then effective Conversion Price for such share immediately upon the affirmative vote or written consent of the holders of at least 70% of the then outstanding Series G Preferred Stock (voting as a single class).

Section 4.3. Mechanics of Conversion. No fractional shares of Common Stock shall be issued upon conversion of Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the then fair market value of a share of Common Stock as determined in good faith by the Board of Directors. For such purpose, all shares of Preferred Stock held by such holders shall be

aggregated together, and any resulting fractional share of Common Stock shall be paid in cash. Before any holder of Preferred Stock shall be entitled to convert the same into full shares of Common Stock, such holder shall surrender at the office of the Corporation or of any transfer agent for the Preferred Stock the certificate or certificates therefor, duly endorsed or assigned in blank, or if such certificate or certificates have been lost, stolen or destroyed, a certificate in form and substance reasonably satisfactory to the Corporation certifying to such fact, together with an agreement reasonably satisfactory to the Corporation to indemnify the Corporation from any loss incurred by the Corporation in connection with such certificate or certificates, and shall give written notice (a "Conversion Notice") to the Corporation at such office that he elects to convert the same and shall state therein his name or the name or names of his nominees in which he wishes the certificate or certificates for shares of Common Stock to be issued, together with the applicable federal taxpayer identification number; provided, that in the event of an automatic conversion of any shares of Preferred Stock pursuant to Section 4.2, the outstanding shares of Preferred Stock so converted shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or any transfer agent for the Preferred Stock; provided further, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such automatic conversion unless the certificates evidencing such shares of Preferred Stock (or if such certificate or certificates have been lost, stolen or destroyed, a certificate in form and substance reasonably satisfactory to the Corporation certifying to such fact, together with an agreement reasonably satisfactory to the Corporation to indemnify the Corporation from any loss incurred by the Corporation in connection with such certificate or certificates) are delivered to the Corporation or such transfer agent. Any Conversion Notice may state the date on or the time at which the conversion provided for therein is to be deemed effective and any conditions to such effectiveness. The Corporation shall, as soon as practicable after the Conversion Date, issue and deliver to such holder of Preferred Stock, or to his nominee or nominees, at such place designed by such holder, a certificate or certificates for the number of shares of Common Stock to which he shall be entitled, together with cash in lieu of any fraction of a share. If a Conversion Notice states a date or time on or at which the conversion provided for therein is to be effective or states any conditions to such effectiveness, then such conversion shall be deemed to have made on or at such date or time or the satisfaction of such conditions, as applicable. If the Conversion Notice does not state any date or time on or at which the conversion provided for therein is to be effective or state any conditions to such effectiveness, then such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted pursuant to Section 4.1, and the holder of Preferred Stock entitled to receive the shares of Common Stock issuable upon conversion shall be treated for all purposes as the record holder of such shares of Common Stock on such date. The date or time at which any conversion of shares of Preferred Stock is deemed effective under Section 4.2 or this Section 4.3 is referred to herein as the "***Conversion Date***."

Section 4.4. Adjustments to Conversion Price for Diluting Issues.

(a) No Adjustment of Conversion Price. Subject to the provisions of Section 4.4(e) and Section 4.4(f), no adjustment in the number of shares of Common Stock into which a series of Senior Preferred Stock is convertible shall be made by adjustment in the Conversion Price for such series of Senior Preferred Stock in respect of the issuance of Additional Shares of Common Stock, unless the consideration per share for such Additional Shares of

Common Stock issued or deemed to be issued by the Corporation is less than the Conversion Price for such series of Senior Preferred Stock in effect on the date of, and immediately prior to, the issue of such Additional Shares of Common Stock.

(b) Issue of Options and Convertible Securities Deemed Issue of Additional Shares of Common Stock. In the event the Corporation at any time or from time to time on or after the Filing Date shall issue any Options or Convertible Securities or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares (as set forth in the instrument relating thereto without regard to any provisions contained therein for a subsequent adjustment of such number and whether or not such Options or Convertible Securities or the right to convert, exercise or exchange such Options or Convertible Securities are immediately exercisable) of Common Stock issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion, exercise or exchange of such Convertible Securities, shall (except as provided in the definition of "Additional Shares of Common Stock") be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date; provided that Additional Shares of Common Stock shall not be deemed to have been issued unless the consideration per share (determined pursuant to Section 4.4(d)) of such Additional Shares of Common Stock would be less than the applicable Conversion Price for the relevant series of Senior Preferred Stock in effect on the date of and immediately prior to such issue, or such record date, as the case may be; and provided, further, that in any such case in which Additional Shares of Common Stock are deemed to be issued:

(i) no further adjustment in the Conversion Price shall be made upon the subsequent issue of Convertible Securities or shares of Common Stock upon the exercise of such Options or conversion, exercise or exchange of such Convertible Securities;

(ii) if such Options or Convertible Securities by their terms provide, with the passage of time or otherwise, for any increase in the consideration payable to the Corporation, or decrease in the number of shares of Common Stock issuable, upon the exercise, conversion or exchange thereof, then the Conversion Price computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto), and any subsequent adjustments based thereon, shall, upon any such increase or decrease becoming effective, be recomputed to reflect such increase or decrease insofar as it affects such Options or the rights of conversion, exercise or exchange under such Convertible Securities;

(iii) upon the expiration of any such Options or any rights of conversion, exercise or exchange under such Convertible Securities which shall not have been converted, exercised or exchanged, the Conversion Price computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto) and any subsequent adjustments based thereon shall, upon such expiration, be recomputed as if:

(A) in the case of Convertible Securities or Options for Common Stock, the only Additional Shares of Common Stock issued were the shares of Common Stock, if any, actually issued upon the exercise of such Options or the conversion, exercise or exchange of such Convertible Securities and the consideration received therefor was the

consideration actually received by the Corporation for the issue of all such Options, whether or not exercised, plus the consideration actually received by the Corporation upon such exercise, or for the issue of all such Convertible Securities which were actually converted, exercised or exchanged, plus the additional consideration, if any, actually received by the Corporation upon such conversion, exercise or exchange, and

(B) in the case of Options for Convertible Securities, only the Convertible Securities, if any, actually issued upon the exercise thereof were issued at the time of issue of such Options, and the consideration received by the Corporation for the Additional Shares of Common Stock deemed to have been then issued was the consideration actually received by the Corporation for the issue of all such Options, whether or not exercised, plus the consideration deemed to have been received by the Corporation (determined pursuant to Section 4.4(d)) upon the issue of the Convertible Securities with respect to which such Options were actually exercised;

(iv) no readjustment pursuant to clause (ii) or (iii) above shall have the effect of increasing the Conversion Price to an amount which exceeds the lower of (x) the Conversion Price on the original adjustment date, or (y) the Conversion Price that would have resulted from any issuance of Additional Shares of Common Stock between the original adjustment date and such readjustment date;

(v) if the terms of any Options or Convertible Securities are revised in any manner which has the effect of either increasing the number of shares of Common Stock issuable upon the exercise, conversion or exchange thereof or decreasing the consideration payable to the Corporation, then the Conversion Price computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto), and any subsequent adjustments based thereon, shall, upon any such increase or decrease becoming effective, be recomputed to reflect such increase or decrease insofar as it affects such Options or the rights of conversion, exercise or exchange under such Convertible Securities; and

(vi) if such record date shall have been fixed and such Options or Convertible Securities are not issued on the date fixed therefor, the adjustment previously made in the Conversion Price which became effective on such record date shall be canceled as of the close of business on such record date, and thereafter the Conversion Price shall be adjusted pursuant to this Section 4.4(b) as of the actual date of their issuance.

(c) Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation at any time or from time to time on or after the Filing Date shall issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Section 4.4(b)) without consideration or for a consideration per share less than the Conversion Price for a series of Senior Preferred Stock in effect immediately prior to such issue, then and in such event, the Conversion Price for such series of Senior Preferred Stock shall be reduced, concurrently with such issue, to a price (calculated to the nearest cent) equal to the consideration per share received by the Corporation for such issue or deemed issue of the Additional Shares of Common Stock; provided that if such issuance or deemed issuance was without consideration, then the Company shall be deemed to have received an

aggregate of $0.001 of consideration for all such Additional Shares of Common Stock issued or deemed to be issued.

(d) Determination of Consideration. For purposes of this Section 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(i) Cash and Property: Such consideration shall:

(A) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest or accrued dividends;

(B) insofar as it consists of property other than cash, be computed at the fair value thereof at the time of such issue, as determined in good faith by the Board of Directors; and

(C) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (1) and (2) above, as determined in good faith by the Board of Directors.

(ii) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Section 4.4(b), relating to Options and Convertible Securities, shall be determined by dividing (x) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration until such subsequent adjustment occurs) payable to the Corporation upon the exercise of such Options or the conversion, exercise or exchange of such Convertible Securities or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion, exercise or exchange of such Convertible Securities, by (y) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number until such subsequent adjustment occurs) issuable upon the exercise of such Options or the conversion, exercise or exchange of such Convertible Securities.

(e) Adjustment for Dividends, Distributions, Subdivisions, Combinations or Consolidation of Common Stock.

(i) Stock Dividends, Distributions or Subdivisions. In the event the Corporation at any time or from time to time on or after the Filing Date shall declare or pay any dividend or make any other distribution on the Common Stock payable in Common Stock or effect a subdivision of the outstanding shares of Common Stock (by reclassification or otherwise than by payment of a dividend in Common Stock), then and in any such event, the Conversion Price for each series of Preferred Stock in effect immediately prior thereto shall be proportionately decreased to reflect such dividend, distribution or subdivision as of:

(A) in the case of any such dividend or distribution, immediately after the close of business on the record date for the determination of holders of any class of securities entitled to receive such dividend or distribution, or

(B) in the case of any such subdivision, at the close of business on the date immediately prior to the date upon which such corporate action becomes effective.

If such record date or other effective date shall have been fixed and such dividend, distribution or subdivision shall not have been fully paid or effected on the date fixed therefor, the adjustment previously made in the Conversion Price which became effective on such record date or other date shall be canceled as of the close of business on such record date or other date, and thereafter the Conversion Price shall be adjusted pursuant to this Section 4.4(e) as of the time of actual payment of such dividend, distribution or effectiveness of such subdivision.

(ii) Combinations or Consolidations. In the event the outstanding shares of Common Stock shall at any time or from time to time on or after the Filing Date be combined or consolidated, by reclassification or otherwise, into a lesser number of shares of Common Stock, the Conversion Price for each series of Preferred Stock in effect immediately prior to such combination or consolidation shall, concurrently with the effectiveness of such combination or consolidation, be proportionately increased.

(f) Adjustment for Reclassification or Reorganization. In case of any capital reorganization or reclassification of the capital stock of the Corporation (other than a reclassification covered by Section 4.4(e)(ii)), each share of Preferred Stock shall thereafter be convertible into the number of shares of stock or other securities or property to which a holder of the number of shares of Common Stock of the Corporation deliverable upon conversion of such Preferred Stock would have been entitled upon such reorganization or reclassification. In any such case, appropriate adjustment (as determined by the Board of Directors) shall be made in the application of these provisions set forth with respect to the rights and interest thereafter of the holders of the Preferred Stock, to the end that these provisions (including provisions with respect to changes in and other adjustments of the Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any shares of stock or other property thereafter deliverable upon the conversion of the Preferred Stock.

Section 4.5. Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price pursuant to this Section 4, the Corporation at its expense shall promptly compute such adjustment or readjustment in accordance with these terms and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written request at any time of any holder of Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (i) such adjustments and readjustments, (ii) the Conversion Price at the time in effect, and (iii) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of such holder’s Preferred Stock.

Section 4.6. Notices of Record Date. In the event of (i) any taking by the Corporation of a record date of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend or other distribution, or (ii) any capital reorganization of the Corporation, any reclassification or recapitalization of the capital stock of the Corporation, any merger or consolidation of the Corporation, and any transfer of all or substantially all of the assets of the Corporation to any other entity or person, or any Liquidation, the Corporation shall mail to each holder of Preferred Stock at least 20 days (or 30 days in the case of an acquisition of the Corporation through a merger or consolidation of the Corporation, the sale, lease, license or other disposition of all or substantially all of its assets and properties or any transaction or series of related transactions) prior to the record date specified therein, a notice specifying (A) the date on which any such record is to be taken for the purpose of such dividend or distribution and a description of such dividend or distribution, (B) the date on which any such reorganization, reclassification, transfer, consolidation, merger or Liquidation is expected to become effective, and (C) the time, if any, that is to be fixed, as to when the holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable upon such reorganization, reclassification, transfer, consolidation, merger or Liquidation. Notwithstanding the requirements of this Section 4.6 and subject to compliance with the Delaware General Corporation Law, this Section 4.6 shall not be applicable and no such notice shall be required with respect to any action that is, or has been, approved by the holders owning at least 52% of the issued and outstanding shares of Preferred Stock, voting together as a single class.

Section 4.7. Common Stock Reserved. The Corporation shall reserve and keep available out of its authorized but unissued Common Stock such number of shares of Common Stock as shall from time to time be sufficient to effect conversion of all outstanding shares of Preferred Stock. If any shares of Common Stock to be reserved for the purpose of conversion of shares of Preferred Stock require registration or listing with, or approval of, any governmental authority, stock exchange or other regulatory body under any federal or state law or regulation or otherwise, before such shares may be validly issued or delivered upon conversion, the Corporation will in good faith and as expeditiously as possible endeavor to secure such registration, listing or approval, as the case may be.

Section 4.8. Other Events Altering Conversion Price. Upon the occurrence of any event not specifically described in this Section 4 as reducing the Conversion Price that, in the reasonable exercise of the business judgment of the Board of Directors of the Corporation reached in good faith, requires, on equitable principles, the reduction of the Conversion Price, the Conversion Price will be so equitably reduced.

ARTICLE 5
VOTING RIGHTS

Section 5.1. General. Except as otherwise required by law and the provisions of this Section 5 and Section 7 below, the holders of the Senior Preferred Stock and the holders of the Common Stock shall be entitled to notice of any stockholders' meeting and to vote together as a single class of capital stock upon any matter submitted to a stockholder for a vote, except as to matters pertaining to the rights or obligations of holders of Preferred Stock, when they shall vote as a class, on the following basis:

(a) Holders of Common Stock shall have one vote per share; and

(b) Holders of Senior Preferred Stock shall have that number of votes per share as is equal to the number of shares of Common Stock into which each such share of Senior Preferred Stock held by such holder is convertible at the time of such vote.

As to all matters with respect to which the Series B-3 Preferred Stock is entitled to vote as a single class, each share of the Series B-3 Preferred Stock shall have one vote. As to all matters with respect to which the Series C Preferred Stock is entitled to vote as a single class, each share of the Series C Preferred Stock shall have one vote. As to all matters with respect to which the Series D Preferred Stock is entitled to vote as a single class, each share of the Series D Preferred Stock shall have one vote. As to all matters with respect to which the Series E Preferred Stock is entitled to vote as a single class, each share of the Series E Preferred Stock shall have one vote. As to all matters with respect to which the Series F Preferred Stock is entitled to vote as a single class, each share of the Series F Preferred Stock shall have one vote. As to all matters with respect to which the Series G Preferred Stock is entitled to vote as a single class, each share of the Series G Preferred Stock shall have one vote.

Except as otherwise required by law, the holders of the Series A-3 Preferred Stock shall have no voting rights. As to all matters with respect to which the Series A-3 Preferred Stock is entitled to vote as required by law, each share of Series A-3 Preferred Stock shall have one vote.

Section 5.2. Election of Board of Directors. The size of the Corporation's board of directors shall be fixed at seven (7) members, which number shall not be increased or decreased without the approval or written consent of the holders of 52% of the outstanding Preferred Stock. The holders of the Senior Preferred Stock and the holders of the Common Stock shall be entitled to vote upon the election of directors on the following basis: (i) four (4) members of the board of directors of the Corporation shall be appointed by the vote of the holders of 52% of the Senior Preferred Stock, voting as a separate class; (ii) one (1) member of the board of directors of the Corporation shall be appointed by the vote of the holders of at least a majority of the Common Stock, and (iii) the remaining members of the board of directors of the Corporation shall be appointed by the vote of the holders of a majority of the Senior Preferred Stock and Common Stock, voting together as a single class. Each director shall serve until he or she resigns, dies, becomes incapacitated or is removed. A director may only be removed and/or replaced by the holders of that percentage of the class or classes or series of stock which were entitled to appoint him or her.

ARTICLE 6
MANDATORY REDEMPTION

Section 6.1. Upon a Redemption Event. Assuming funds are available within the Corporation and redemption would not put the Corporation at a financial risk, upon the request in writing of the holders of 52% of the outstanding shares of Senior Preferred Stock, on or after a Redemption Event, the Corporation shall redeem, and every holder of Senior Preferred Stock desiring to sell shall sell its outstanding shares of Senior Preferred Stock at the Redemption Price per share, payable in cash, in each case in accordance with this Section 6. The determination of whether funds are available with the Corporation and whether the redemption would put the

Corporation at financial risk shall be made by the Board of Directors and the holders of 70% of the then outstanding shares of Series G Preferred Stock.

Section 6.2. Upon the Fifth Anniversary of the Initial Issuance of Series G Preferred Stock. Upon the request in writing of the holders of 52% of the outstanding shares of Senior Preferred Stock, at any time after December 28, 2023, the Corporation shall redeem and every holder of Senior Preferred Stock desiring to sell shall sell its outstanding shares of Senior Preferred Stock at the Redemption Price per share, payable in cash, in each case in accordance with this Section 6.

Section 6.3. Mechanics of Redemption. The following provisions shall apply to any redemption pursuant to this Section 6:

(a) On the Redemption Date, the Corporation shall deposit for the benefit of the holders of the shares of the outstanding Senior Preferred Stock to be redeemed the funds necessary for the redemption of such outstanding shares of Senior Preferred Stock with a bank or trust company, having a capital and surplus of at least $50,000,000.

(i) Holders of shares of Series G Preferred Stock, prior to any redemption of any shares of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock or Series B-3 Preferred Stock, shall thereafter have the right to receive (i) payment of the Redemption Price for such shares by surrendering to the Corporation, at its principal office or at such other office or agency maintained by the Corporation for that purpose, a certificate or certificates representing the shares of Series G Preferred Stock or (ii) a certificate or certificates for the number of shares of Common Stock into which such holder's shares of Series G Preferred Stock are then convertible pursuant to Section 4 hereof, by surrendering a certificate or certificates representing the shares of Series G Preferred Stock in accordance with the provisions of Section 4 hereof, accompanied by any documentation required therein. If the Corporation does not have sufficient funds legally available to redeem all shares of Series G Preferred Stock to be redeemed pursuant to this Section 6.3, then it shall so notify such holders and shall redeem such shares pro rata (based on the portion of the aggregate Redemption Price for the Series G Preferred Stock payable to them) to the extent possible and shall redeem the remaining shares to be redeemed as soon as sufficient funds are legally available.

(ii) Holders of shares of Series F Preferred Stock, prior to any redemption of any shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock or Series B-3 Preferred Stock, shall thereafter have the right to receive (i) payment of the Redemption Price for such shares by surrendering to the Corporation, at its principal office or at such other office or agency maintained by the Corporation for that purpose, a certificate or certificates representing the shares of Series F Preferred Stock or (ii) a certificate or certificates for the number of shares of Common Stock into which such holder's shares of Series F Preferred Stock are then convertible pursuant to Section 4 hereof, by surrendering a certificate or certificates representing the shares of Series F Preferred Stock in accordance with the provisions of Section 4 hereof, accompanied by any documentation required therein. If the Corporation does not have sufficient funds legally available to redeem all shares of Series F Preferred Stock to be redeemed pursuant to this Section 6.3, then it shall so notify such holders and shall redeem such shares pro rata (based on the portion of the aggregate Redemption Price for the Series F Preferred Stock

payable to them) to the extent possible and shall redeem the remaining shares to be redeemed as soon as sufficient funds are legally available.

(iii) Holders of shares of Series E Preferred Stock, prior to any redemption of any shares of Series D Preferred Stock, Series C Preferred Stock or Series B-3 Preferred Stock, shall thereafter have the right to receive (i) payment of the Redemption Price for such shares by surrendering to the Corporation, at its principal office or at such other office or agency maintained by the Corporation for that purpose, a certificate or certificates representing the shares of Series E Preferred Stock or (ii) a certificate or certificates for the number of shares of Common Stock into which such holder's shares of Series E Preferred Stock are then convertible pursuant to Section 4 hereof, by surrendering a certificate or certificates representing the shares of Series E Preferred Stock in accordance with the provisions of Section 4 hereof, accompanied by any documentation required therein. If the Corporation does not have sufficient funds legally available to redeem all shares of Series E Preferred Stock to be redeemed pursuant to this Section 6.3, then it shall so notify such holders and shall redeem such shares pro rata (based on the portion of the aggregate Redemption Price for the Series E Preferred Stock payable to them) to the extent possible and shall redeem the remaining shares to be redeemed as soon as sufficient funds are legally available.

(iv) Holders of shares of Series D Preferred Stock, prior to any redemption of any shares of Series C Preferred Stock or Series B-3 Preferred Stock, shall thereafter have the right to receive (i) payment of the Redemption Price for such shares by surrendering to the Corporation, at its principal office or at such other office or agency maintained by the Corporation for that purpose, a certificate or certificates representing the shares of Series D Preferred Stock or (ii) a certificate or certificates for the number of shares of Common Stock into which such holder's shares of Series D Preferred Stock are then convertible pursuant to Section 4 hereof, by surrendering a certificate or certificates representing the shares of Series D Preferred Stock in accordance with the provisions of Section 4 hereof, accompanied by any documentation required therein. If the Corporation does not have sufficient funds legally available to redeem all shares of Series D Preferred Stock to be redeemed pursuant to this Section 6.3, then it shall so notify such holders and shall redeem such shares pro rata (based on the portion of the aggregate Redemption Price for the Series D Preferred Stock payable to them) to the extent possible and shall redeem the remaining shares to be redeemed as soon as sufficient funds are legally available.

(v) Holders of shares of Series C Preferred Stock, prior to any redemption of any shares of Series B-3 Preferred Stock, shall thereafter have the right to receive (i) payment of the Redemption Price for such shares by surrendering to the Corporation, at its principal office or at such other office or agency maintained by the Corporation for that purpose, a certificate or certificates representing the shares of Series C Preferred Stock or (ii) a certificate or certificates for the number of shares of Common Stock into which such holder's shares of Series C Preferred Stock are then convertible pursuant to Section 4 hereof, by surrendering a certificate or certificates representing the shares of Series C Preferred Stock in accordance with the provisions of Section 4 hereof, accompanied by any documentation required therein. If the Corporation does not have sufficient funds legally available to redeem all shares of Series C Preferred Stock to be redeemed pursuant to this Section 6.3, then it shall so notify such holders and shall redeem such shares pro rata (based on the portion of the aggregate Redemption Price for the Series C Preferred

Stock payable to them) to the extent possible and shall redeem the remaining shares to be redeemed as soon as sufficient funds are legally available.

(vi) Subject to the redemption of the Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock and Series C Preferred Stock as provided in subsections (i), (ii), (iii), (iv) and (v) above, holders of shares of Series B-3 Preferred Stock shall thereafter have the right to receive (i) payment of the Redemption Price for such shares by surrendering to the Corporation, at its principal office or at such other office or agency maintained by the Corporation for that purpose, a certificate or certificates representing the shares of Series B-3 Preferred Stock or (ii) a certificate or certificates for the number of shares of Common Stock into which such holder's shares of Series B-3 Preferred Stock are then convertible pursuant to Section 4 hereof, by surrendering a certificate or certificates representing the shares of Series B-3 Preferred Stock in accordance with the provisions of Section 4 hereof, accompanied by any documentation required therein. If the Corporation does not have sufficient funds legally available to redeem all shares of Series B-3 Preferred Stock to be redeemed pursuant to this Section 6.3, then it shall so notify such holders and shall redeem such shares pro rata (based on the portion of the aggregate Redemption Price for the Series B-3 Preferred Stock payable to them) to the extent possible and shall redeem the remaining shares to be redeemed as soon as sufficient funds are legally available.

(vii) Any monies so deposited by the Corporation with a bank or trust company pursuant to this Section 6.3(a) and unclaimed at the end of one year from the Redemption Date (the "First Anniversary") shall revert to the general funds of the Corporation. After the First Anniversary, any such bank or trust company shall, upon demand, pay over to the Corporation such unclaimed amounts and thereupon such bank or trust company shall be relieved of all responsibility in respect thereof to such holder and such holder shall look only to the Corporation for the payment of the Redemption Price. After the First Anniversary, any holder of shares of Senior Preferred Stock who does not surrender a certificate or certificates representing the shares of Senior Preferred Stock for conversion in accordance with the provisions of Section 4 hereof, shall look only to the Corporation for the payment of the Redemption Price and shall waive and forfeit any rights to convert such shares of Senior Preferred Stock granted hereunder. Any interest accrued on funds so deposited pursuant to this Section 6.3 shall be paid from time to time to the Corporation for its own account.

(b) Upon the deposit of funds pursuant to Section 6.3(a) necessary to effect the redemption of all outstanding shares of the Senior Preferred Stock, notwithstanding that any certificates for such shares shall not have been surrendered for cancellation, the shares represented thereby shall no longer be deemed outstanding, the rights to receive dividends thereon shall cease to accrue from and after the Redemption Date and all rights of the holders of the shares of the Senior Preferred Stock shall cease and terminate, excepting only the right to receive the Redemption Price therefor as provided in this Section 6 or to convert such shares into shares of Common Stock. If the Corporation does not deposit funds pursuant to Section 6.3(a) necessary to effect the redemption of all outstanding shares of the Senior Preferred Stock, then each outstanding share of Series Preferred Stock shall remain outstanding and all rights of the holders thereof shall continue until such time as a certificate for such shares have been surrendered for cancellation in connection with the payment of the Redemption Price or converted into shares of Common Stock as provided.

ARTICLE 7
COVENANTS

Section 7.1. So long as any shares of Senior Preferred Stock shall be outstanding, the Corporation shall not, directly or indirectly by merger, reorganization, consolidation or other means, without first obtaining the affirmative vote or written consent of the holders of 52% of the then outstanding shares of Senior Preferred Stock, voting as a single class:

(a) alter, change or amend the Corporation's Amended and Restated Certificate of Incorporation or the Corporation's bylaws;

(b) authorize, create or issue any other class or classes of stock or series of stock or other equity securities or stock appreciation rights or other similar phantom equity rights;

(c) subject to the approvals required pursuant to Section 7.6(b) below, increase the authorized or designated number of shares of the Corporation's capital stock;

(d) merge or consolidate into or with another corporation or entity or sell, lease, license or otherwise dispose of all or substantially all of the Corporation's assets (whether held directly or indirectly through one or more controlled subsidiaries);

(e) acquire (whether directly or through a subsidiary) another entity or an interest in another entity;

(f) pay or declare any dividend or other distribution on any shares of Common Stock or other securities of the Corporation (except as provided by Section 2);

(g) increase or decrease the number of directors constituting the Board of Directors;

(h) apply any of its assets to the redemption, retirement, purchase or other acquisition directly or indirectly, through subsidiaries, if any, or otherwise, of any shares of its capital stock or debt securities, except as provided in Section 6 or from officers, directors or employees of or consultants to the Corporation upon termination of employment pursuant to written agreements in effect on the Filing Date;

(i) enter into any agreement to borrow money that would increase the Corporation's total indebtedness to be greater than $500,000;

(j) effect any Liquidation or reclassify or recapitalize any of its outstanding capital stock;

(k) assign any intellectual property rights of the Corporation or enter into any material agreement with respect to any intellectual property rights of the Corporation;

(l) engage in any business outside of the molecular diagnostics industry;

(m) increase the number of shares reserved for issuance under employee stock incentive plans; or

(n) issue any shares of Series A-3 Preferred Stock, Series B-3 Preferred Stock, Series C Preferred Stock, Series D Preferred Stock, Series E Preferred Stock or Series F Preferred Stock.

Section 7.2. So long as any shares of Series C Preferred Stock shall be outstanding, the Corporation shall not, directly or indirectly by merger, reorganization, consolidation or other means, without first obtaining the affirmative vote or written consent of the holders of at least 50% of the then outstanding shares of Series C Preferred Stock, voting as a single class:

(a) apply any of its assets to the redemption, retirement, purchase or other acquisition directly or indirectly, through subsidiaries, if any, or otherwise, of any shares of its capital stock or debt securities, except as provided in Section 6 or from officers, directors or employees of or consultants to the Corporation upon termination of employment pursuant to written agreements under which this Corporation has the option to repurchase such shares; or

(b) amend, repeal or modify any of the rights, privileges or preferences of the Series C Preferred Stock.

Section 7.3. So long as any shares of Series D Preferred Stock shall be outstanding, the Corporation shall not, directly or indirectly by merger, reorganization, consolidation or other means, without first obtaining the affirmative vote or written consent of the holders of at least 50% of the then outstanding shares of Series D Preferred Stock, voting as a single class:

(a) apply any of its assets to the redemption, retirement, purchase or other acquisition directly or indirectly, through subsidiaries, if any, or otherwise, of any shares of its capital stock or debt securities, except as provided in Section 6 or from officers, directors or employees of or consultants to the Corporation upon termination of employment pursuant to written agreements under which this Corporation has the option to repurchase such shares; or

(b) amend, repeal or modify any of the rights, privileges or preferences of the Series D Preferred Stock.

Section 7.4. So long as any shares of Series E Preferred Stock shall be outstanding, the Corporation shall not, directly or indirectly by merger, reorganization, consolidation or other means, without first obtaining the affirmative vote or written consent of the holders of at least 56% of the then outstanding shares of Series E Preferred Stock, voting as a single class:

(a) apply any of its assets to the redemption, retirement, purchase or other acquisition directly or indirectly, through subsidiaries, if any, or otherwise, of any shares of its capital stock or debt securities, except as provided in Section 6 or from officers, directors or employees of or consultants to the Corporation upon termination of employment pursuant to written agreements under which this Corporation has the option to repurchase such shares; or

(b) amend, repeal or modify any of the rights, privileges or preferences of the Series E Preferred Stock.

Section 7.5. So long as any shares of Series F Preferred Stock shall be outstanding, the Corporation shall not, directly or indirectly by merger, reorganization, consolidation or other means, without first obtaining the affirmative vote or written consent of the holders of at least 50% of the then outstanding shares of Series F Preferred Stock, voting as a single class:

(a) apply any of its assets to the redemption, retirement, purchase or other acquisition directly or indirectly, through subsidiaries, if any, or otherwise, of any shares of its capital stock or debt securities, except as provided in Section 6 or from officers, directors or employees of or consultants to the Corporation upon termination of employment pursuant to written agreements under which this Corporation has the option to repurchase such shares; or

(b) amend, repeal or modify any of the rights, privileges or preferences of the Series F Preferred Stock.

Section 7.6. So long as any shares of Series G Preferred Stock shall be outstanding, the Corporation shall not, directly or indirectly by merger, reorganization, consolidation or other means, without first obtaining the affirmative vote or written consent of the holders of at least 70% of the then outstanding shares of Series G Preferred Stock, voting as a single class:

(a) apply any of its assets to the redemption, retirement, purchase or other acquisition directly or indirectly, through subsidiaries, if any, or otherwise, of any shares of its capital stock or debt securities, except as provided in Section 6 or from officers, directors or employees of or consultants to the Corporation upon termination of employment pursuant to written agreements under which this Corporation has the option to repurchase such shares;

(b) increase the authorized or designated number of shares of the Series G Preferred Stock;

(c) pay or declare any dividend or other distribution on any shares of Common Stock or other securities of the Corporation (except as provided by Section 2);

(d) authorize, create or issue any other class or classes of stock or series of stock or other equity securities having rights, preferences or privileges superior to or on parity with the Series G Preferred Stock;

(e) increase or decrease the number of directors constituting the Board of Directors;

(f) effect any Liquidation or reclassify or recapitalize any of its outstanding capital stock; or

(g) amend, repeal or modify any of the rights, privileges or preferences of the Series G Preferred Stock.

ARTICLE 8
NO IMPAIRMENT

The Corporation will not, by amendment of its Amended and Restated Certificate of Incorporation or through any reorganization, transfer of capital stock or assets, consolidation, merger, dissolution, issue of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of the Preferred Stock set forth herein, but will at all times in good faith assist in the carrying out of all such terms. Without limiting the generality of the foregoing, the Corporation (a) will not increase the par value of any shares of stock receivable on the conversion of any shares of Preferred Stock above the Original Issue Price for such shares of Preferred Stock, and (b) will take such action as may be necessary or appropriate in order that the Corporation may validly and legally issue fully paid and nonassessable shares of stock on the conversion of the Preferred Stock from time to time outstanding.

ARTICLE 9
RESIDUAL RIGHTS

All rights accruing to the outstanding shares of the Corporation not expressly provided for to the contrary shall be vested in the Common Stock.

ARTICLE 10
NO REISSUANCE OF PREFERRED STOCK

No share or shares of Preferred Stock acquired by the Corporation by reason of redemption, purchase, conversion or otherwise shall be reissued, and all such shares shall be canceled, retired and eliminated from the shares which the Corporation shall be authorized to issue.

ARTICLE FIFTH
CERTAIN MATTERS AS TO CREDITORS

Whenever a compromise or arrangement is proposed between the Corporation and its creditors or any class of them and/or between the Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of the Corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for the Corporation under Section 291 of Title 8 of the Delaware General Corporation Law or on the application of trustees in dissolution or of any receiver or receivers appointed for the Corporation under Section 279 of Title 8 of the Delaware General Corporation Law order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of the Corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of the Corporation, as the case may be, and also on the Corporation.

ARTICLE SIXTH
LIMITATION OF LIABILITY; INDEMNIFICATION

The directors of the Corporation shall be entitled to the benefits of all limitations on the liability of directors generally that are now or hereafter become available under the Delaware General Corporation Law. Without limiting the generality of the foregoing, no director of the Corporation shall be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law or (iv) for any transaction from which the director derived an improper personal benefit. If the Delaware General Corporation Law is amended after the filing of the Amended and Restated Certificate of Incorporation of which this article is a part to authorize corporate action further eliminating or limiting the personal liability of directors, the liability of a director of the corporation shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended. Any repeal or modification of the foregoing paragraph shall be prospective only, and shall not affect, to the detriment of any director, any limitation on the personal liability of a director of the Corporation existing at the time of such repeal or modification.

The Corporation shall, to the fullest extent permitted by the provisions of Section 145 of the General Corporation Law of the State of Delaware, as the same may be amended and supplemented, indemnify past and present directors, and may indemnify any and all persons whom it shall have power to indemnify under said section from and against any and all expenses, liabilities, or other matters referred to in or covered by said section, and the indemnification provided for herein shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any by-law, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of such person.

ARTICLE SEVENTH
BY-LAWS

The original by-laws of the Corporation shall be adopted by the incorporator. Thereafter, the Directors of the Corporation shall have the power to adopt, amend or repeal the by-laws of the Corporation.

ARTICLE EIGHTH
ELECTION OF DIRECTORS

The election of the directors of the Corporation need not be by written ballot unless the by-laws of the Corporation shall so provide.

ARTICLE NINTH
REPURCHASES OF COMMON STOCK

In connection with repurchases by the Corporation of its Common Stock from employees, officers, directors, advisors, consultants or other persons performing services for the Corporation or any subsidiary pursuant to agreements under which the Corporation has the option to repurchase such shares at cost upon the occurrence of certain events, such as the termination of employment, Sections 502 and 503 of the California Corporations Code shall not apply in their entirety or in part with respect to such repurchases.

ARTICLE TENTH
CORPORATE OPPORTUNITIES

The Corporation renounces any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "Excluded Opportunity" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of, any director of the Corporation who is also a partner, member, stockholder, manager or employee of a Fund (as defined below) or a partner, member, stockholder, manager or employee of an entity that serves as the general partner or in a similar capacity for or manages such Fund, and that may be a corporate opportunity for both the Corporation and such Fund or any entity in which such Fund hold an investment or interest; provided, however, that nothing herein or otherwise shall limit the Corporation's right to pursue or consummate any transaction related to any Excluded Opportunity even if originated by any director or any Fund. For purposes of this Article Tenth, a "Fund" shall mean an entity (or any partner, member, director, stockholder, employee or agent of any such entity, other than someone who is an employee of the Corporation or any of its subsidiaries) that is a holder of Preferred Stock and that is in the business of investing and reinvesting in other entities.

* * * *

THIRD: This Amended and Restated Certificate of Incorporation has been duly adopted by the Board of Directors of the Corporation.

FOURTH: This Amended Restated Certificate of Incorporation has been duly adopted in accordance with the provisions of Sections 228, 242 and 245 of the Delaware General Corporation Law, chapter 1, title 8, of the Delaware Code and has been approved by a sufficient number of votes cast by the stockholders of the Corporation.

* * * * *

IN WITNESS WHEREOF, the undersigned, the President and Chief Executive Officer of the above named Corporation, has hereunto signed this Amended and Restated Certificate of Incorporation on the 2nd day of January, 2019.

/s/ Ron Rocca

Name: Ron Rocca
Title: President and Chief Executive Officer

Exhibit 3.2

BYLAWS

OF
EXAGEN DIAGNOSTICS, INC.

ARTICLE I
OFFICES

Section 1. Registered Office. The registered office shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 2. Other Offices. The corporation may also have offices at such other places both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II
MEETINGS OF STOCKHOLDERS

Section 1. Time and Place. All meetings of the stockholders for the election of directors shall be held in the City of Albuquerque, State of New Mexico, at such place as may be fixed from time to time by the Board of Directors, or at such other place either within or without the State of Delaware as shall be designated from time to time by the Board of Directors and stated in the notice of the meeting. Meetings of stockholders for any other purpose may be held at such time and place, within or without the State of Delaware, as shall be stated in the notice of the meeting or in a duly executed waiver of notice thereof.

Section 2. Annual Meeting. Annual meetings of stockholders shall be held on the third Wednesday in December in each year if not a legal holiday, and if a legal holiday, then on the next secular day following, at 10:00 a.m. or at such other date and time as shall be designated from time to time by the Board of Directors or the chief executive officer, at which meeting the stockholders shall elect by a plurality vote a board of directors, and transact such other business as may properly be brought before the meeting. If no annual meeting is held in accordance with the foregoing provisions, the Board of Directors shall cause the meeting to be held as soon thereafter as convenient, which meeting shall be designated a special meeting in lieu of annual meeting.

Section 3. Notice of Annual Meeting. Written notice of the annual meeting stating the place, date and hour of the meeting shall be given to each stockholder entitled to vote at such meeting not fewer than ten (10) nor more than sixty (60) days before the date of the meeting.

Section 4. Voting List. The officer who has charge of the stock ledger of the corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the

meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 5. Special Meetings. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the certificate of incorporation, may be called by the president and shall be called by the president or secretary at the request in writing of a majority of the Board of Directors, or at the request in writing of stockholders owning a majority in amount of the entire capital stock of the corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting.

Section 6. Notice of Special Meeting. Written notice of a special meeting stating the place, date and hour of the meeting and the purpose or purposes for which the meeting is called, shall be given not fewer than ten (10) nor more than sixty (60) days before the date of the meeting, to each stockholder entitled to vote at such meeting.

Section 7. Limited Purpose of Special Meeting. Business transacted at any special meeting of stockholders shall be limited to the purposes stated in the notice.

Section 8. Quorum. The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the certificate of incorporation. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At such adjourned meeting at which a quorum shall be present or represented any business may be transacted which might have been transacted at the meeting as originally notified. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 9. Action at Meetings. When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which by express provision of the statutes or of the certificate of incorporation, a different vote is required, in which case such express provision shall govern and control the decision of such question.

Section 10. Voting and Proxies. Unless otherwise provided in the certificate of incorporation, each stockholder shall at every meeting of the stockholders be entitled to one vote in person or by proxy for each share of the capital stock having voting power held by such stockholder,

but no proxy shall be voted on after three (3) years from its date, unless the proxy provides for a longer period.

Section 11. Action by Written Consent. Unless otherwise provided in the certificate of incorporation, any action required to be taken at any annual or special meeting of stockholders of the corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

ARTICLE III
DIRECTORS

Section 1. Number, Election, Tenure and Qualification. The number of directors which shall constitute the whole board shall be determined by resolution of the Board of Directors or by the stockholders at the annual meeting, or any special meeting, of the stockholders. The directors shall be elected at the annual meeting or any special meeting of the stockholders. Except as provided in Section 3 of this Article, and each director elected shall hold office until his successor is elected and qualified, unless sooner displaced. Directors need not be stockholders.

Section 2. Enlargement. The number of the Board of Directors may be increased at any time by vote of a majority of the directors then in office.

Section 3. Vacancies. Vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual election and until their successors are duly elected and shall qualify, unless sooner displaced. If there are no directors in office, then an election of directors may be held in the manner provided by statute. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law or these bylaws, may exercise the powers of the full board until the vacancy is filled. If, at the time of filing any vacancy or any newly created directorship, the directors then in office shall constitute less than a majority of the whole board (as constituted immediately prior to any such increase), the Court of Chancery may, upon application of any stockholder or stockholders holding at least ten percent (10%) of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office.

Section 4. General Powers. The business of the corporation shall be managed by or under the direction of its Board of Directors which may exercise all such powers of the corporation

band do all such lawful acts and things as are not by statute or by the certificate of incorporation or by these bylaws directed or required to be exercised or done by the stockholders.

Section 5. Place of Meetings. The Board of Directors of the corporation may hold meetings, both regular and special, either within or without the State of Delaware.

Section 6. Regular Meetings. A regular meeting of the Board of Directors may be held without notice immediately after and at the same place as the annual meeting of stockholders. Regular meetings of the Board of Directors also may be held without notice at such time and at such place as shall from time to time be determined by the Board, provided that any director who is absent when such a determination is made shall be given prompt notice of such determination.

Section 7. Special Meetings. Special meetings of the Board of Directors may be called by the chief executive officer or secretary on three (3) days' notice to each director by mail or two (2) days' notice to each director either personally or by telegram; special meetings shall be called by the chief executive officer or secretary in like manner and on like notice on the written request of two directors unless the board consists of only one director, in which case special meetings shall be called by the chief executive officer or secretary in like manner and on like notice on the written request of the sole director.

Section 8. Quorum, Action at Meeting, Adjournments. At all meetings of the Board of Directors a majority of the directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically provided by statute or by the certificate of incorporation. If a quorum shall not be present at any meeting of the Board of Directors, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 9. Action by Written Consent. Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the board or committee.

Section 10. Telephonic Meetings. Unless otherwise restricted by the certificate of incorporation or these bylaws, members of the Board of Directors, or any committee designated by the Board of Directors, may participate in a meeting of the Board of Directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

Section 11. Committees. The Board of Directors may, by resolution passed by a majority of the whole board, designate one (1) or more committees, each committee to consist of one (1) or more of the directors of the corporation. The Board may designate one (1) or more directors as

alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee.

In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

Section 12. Records. Each committee shall keep regular minutes of its meetings and report the same to the Board of Directors Any such committee, to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to amending the certificate of incorporation (except as otherwise permitted by Section 141(c)(1) of the General Corporation Law of Delaware or any successor to such section), adopting an agreement of merger or consolidation, recommending to the stockholders the sale, lease or exchange of all or substantially all of the corporation's property and assets, recommending to the stockholders a dissolution of the corporation or a revocation of a dissolution, or amending the bylaws of the corporation and, unless the resolution designating such committee or the certificate of incorporation expressly so provides, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock, or to adopt a certificate of ownership and merger pursuant to Section 253 of the General Corporation Law of Delaware (or any successor to such section). Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board of Directors when required.

Section 13. Compensation. Unless otherwise restricted by the certificate of incorporation or these bylaws, the Board of Directors shall have the authority to fix the compensation of directors. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary as director. No such payment shall preclude any director from serving the corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed compensation for service or committees.

Section 14. Resignation and Removal. Any director may resign at any time. Unless otherwise restricted by the certificate of incorporation or bylaw, any director or the entire Board of Directors may be removed, with or without cause, by the holders of a majority of shares entitled to vote at an election of directors.

ARTICLE IV
NOTICES

Section 1. Delivery. Whenever, under the provisions of the statutes or of the certificate of incorporation or of these bylaws, notice is required to be given to any director or stockholder, it shall not be construed to mean personal notice, but such notice may be given in writing, by mail, addressed to such director or stockholder, at his address as it appears on the records of the corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mails. Notice to directors may also be given by telegram.

Section 2. Waiver. Whenever any notice is required to be given under the provisions of the statutes or of the certificate of incorporation or of these bylaws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE V
OFFICERS

Section 1. Enumeration. The officers of the corporation shall be chosen by the Board of Directors and shall be a president, treasurer, and secretary. The Board of Directors may elect from among its members a Chairman of the Board and a Vice Chairman of the Board. The Board of Directors may also choose one or more vice-presidents, assistant secretaries, and assistant treasurers as they deem appropriate. Any number of offices may be held by the same person, unless the certificate of incorporation or these bylaws otherwise provide.

Section 2. Election. The Board of Directors at its first meeting after the first annual meeting of stockholders shall choose a president, a treasurer, and a secretary, and may choose vice presidents, all of whom shall hold their offices for such terms as shall be determined from time to time by the Board of Directors.

Section 3. Other Officers. The Board of Directors may appoint such other officers and agents as it shall deem necessary who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the board.

Section 4. Compensation. The salaries of all officers and agents of the corporation shall be fixed by the Board of Directors.

Section 5. Tenure, Removal, and Vacancy. The officers of the corporation shall hold office until their successors are chosen and qualified. Any officer elected or appointed by the Board of Directors may be removed at any time by the affirmative vote of a majority of the Board of Directors. Any vacancy occurring in any office of the corporation shall be filled by the Board of Directors.

Section 6. Chairman of the Board. The Chairman of the Board, if any, shall preside at all meetings of the Board of Directors and of the stockholders at which he shall be present. He shall have and may exercise such powers as are, from time to time, assigned to him by the Board and as may be provided by law.

Section 7. Vice Chairman of the Board. In the absence of the Chairman of the Board, the Vice Chairman of the Board, if any, shall preside at all meetings of the Board of Directors and of the stockholders at which he shall be present. He shall have and may exercise such powers as are, from time to time, assigned to him by the Board and as may be provided by law.

Section 8. President. The president, unless another officer is so designated, shall be the chief executive officer of the corporation; and in the absence of the Chairman and Vice Chairman of the Board he shall preside at all meetings of the stockholders and the Board of Directors; he shall have general and active management of the business of the corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. He shall execute bonds, mortgages and other contracts requiring a seal, under the seal of the corporation, except where required or permitted by law to be otherwise signed and executed and except where the signing and execution thereof shall be expressly delegated by the Board of Directors to some other officer or agent of the corporation.

Section 9. Vice Presidents. In the absence of the president or in the event of his inability or refusal to act, the vice-president, if any, (or in the event there be more than one vice-president, the vice-presidents in the order designated by the directors, or in the absence of any designation, then in the order of their election) shall perform the duties of the president, and when so acting, shall have all the powers of and be subject to all the restrictions upon the president The vice-presidents shall perform such other duties and have such other powers as the Board of Directors may from time to time prescribe.

Section 10. Secretary. The secretary shall attend all meetings of the Board of Directors and all meetings of the stockholders and record all the proceedings of the meetings of the corporation and of the Board of Directors in a book to be kept for that purpose and shall perform like duties for the standing committees when required. He shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors, and shall perform such other duties as may be prescribed by the Board of Directors or president, under whose supervision he shall be. He shall have custody of the corporate seal of the corporation and he, or an assistant secretary, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by his signature or by the signature of such assistant secretary. The Board of Directors may give general authority to any other officer to affix the seal of the corporation and to attest the affixing by his signature.

Section 11. Assistant Secretaries. The assistant secretary, or if there be more than one, the assistant secretaries in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the event

of his inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

Section 12. Treasurer. The treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by the Board of Directors. He shall disburse the funds of the corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the president and the Board of Directors, at its regular meetings, or when the Board of Directors so requires, an account of all his transactions as treasurer and of the financial condition of the corporation.

Section 13. Bond. If required by the Board of Directors, he shall give the corporation a bond (which shall be renewed every six (6) years) in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of his office and for the restoration to the corporation, in case of his death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his possession or under his control belonging to the corporation.

Section 14. Assistant Treasurers. The assistant treasurer, or if there shall be more than one (1), the assistant treasurers in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election) shall, in the absence of the treasurer or in the event of his inability or refusal to act, perform the duties and exercise the powers of the treasurer and shall perform such other duties and have such other powers as the Board of Directors may from time to time prescribe.

ARTICLE VI
STOCK

Section 1. Certificates of Stock. Every holder of stock in the corporation shall be entitled to have a certificate, signed by, or in the name of the corporation by, the chairman or vice- chairman of the Board of Directors, or the president or a vice-president and the treasurer or an assistant treasurer, or the secretary or an assistant secretary of the corporation, certifying the number of shares owned by him in the corporation.

Certificates may be issued for partly paid shares and in such case upon the face or back of the certificates issued to represent any such partly paid shares, the total amount of the consideration to be paid therefor, and the amount paid thereon shall be specified.

If the corporation shall be authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualification, limitations or restrictions

of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate which the corporation shall issue to represent such class or series of stock, provided that, except as otherwise provided in section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate which the corporation shall issue to represent such class or series of stock, a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Any of or all the signatures on the certificate may be facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

Section 2. Lost Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or his legal representative, to advertise the same in such manner as it shall require and/or to give the corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen or destroyed.

Section 3. Transfer of Stock. Upon surrender to the corporation or the transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the a new certification upon its books.

Section 4. Record Date. In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholder or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than sixty nor less than ten days before the date of such meeting, nor more than sixty days prior to any other action. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

Section 5. Registered Stockholders. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as

the owner of shares and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VII
GENERAL PROVISIONS

Section 1. Dividends. Dividends upon the capital stock of the corporation, subject to the provisions of the certificate of incorporation, if any, may be declared by the Board of Directors at any regular or special meeting, pursuant to law: Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the certificate of incorporation.

Section 2. Reserves. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purposes as the directors shall think conducive to the interest of the corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

Section 3. Checks. All checks or demands for money and notes of the corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 4. Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

Section 5. Seal. The Board of Directors may adopt a corporate seal having inscribed thereon the name of the corporation, the year of its organization and the words “Corporate Seal, Delaware”. The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

Section 6. Indemnification. The corporation shall, to the fullest extent authorized under the laws of the State of Delaware, as those laws may be amended and supplemented from time to time, indemnify any director made, or threatened to be made, a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of being a director of the corporation or a predecessor corporation or, at the corporation’s request, a director or officer of another corporation, provided, however, that the corporation shall indemnify any such agent in connection with a proceeding initiated by such agent only if such proceeding was authorized by the Board of Directors of the corporation. The indemnification provided for in this Section 6 shall: (i) not be deemed exclusive of any other rights to which those indemnified may be entitled under any bylaw, agreement or vote of stockholders or disinterested directors or otherwise, both as to action in their official capacities and as to action in another capacity while holding such office, (ii) continue as to a person who has ceased to be a director, and (iii) inure to the benefit of the heirs, executors and

administrators of such a person. The corporation's obligation to provide indemnification under this Section 6 shall be offset to the extent of any other source of indemnification or any otherwise applicable insurance coverage under a policy maintained by the corporation or any other person.

Expenses incurred by a director of the corporation in defending a civil or criminal action, suit or proceeding by reason of the fact that he is or was a director of the corporation (or was serving at the corporation's request as a director or officer of another corporation) shall be paid by the corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the corporation as authorized by relevant sections of the General Corporation Law of Delaware. Notwithstanding the foregoing, the corporation shall not be required to advance such expenses to an agent who is a party to an action, suit or proceeding brought by the corporation and approved by a majority of the Board of Directors of the corporation which alleges willful misappropriation of corporate assets by such agent, disclosure of confidential information in violation of such agent's fiduciary or con obligations to the corporation or any other willful and deliberate breach in bad faith of such agent's duty to the corporation or its stockholders.

The foregoing provisions of this Section 6 shall be deemed to be a contract between the corporation and each director who serves in such capacity at any time while this bylaw is in effect, and any repeal or modification thereof shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought based in whole or in part upon any such state of facts.

The Board of Directors in its discretion shall have power on behalf of the corporation to indemnify any person, other than a director, made a party to any action, suit or proceeding by reason of the fact that he, his testator or intestate, is or was an officer or employee of the corporation.

To assure indemnification under this Section 6 of all directors, officers and employees who are determined by the corporation or otherwise to be or to have been "fiduciaries" of any employee benefit plan of the corporation which may exist from time to time, Section 145 of the General Corporation Law of Delaware shall, for the purposes of this Section 6, be interpreted as follows: an "other enterprise" shall be deemed to include such an employee benefit plan, including without limitation, any plan of the corporation which is governed by the Act of Congress entitled "Employee Retirement Income Security Act of 1974," as amended from time to. time; the corporation shall be deemed to have requested a person to serve an employee benefit plan where the performance by such person of his duties to the corporation also imposes duties on, or otherwise involves services by, such person to the plan or participants or beneficiaries of the plan; excise taxes assessed on a person with respect to an employee benefit plan pursuant to such Act of Congress shall be deemed "fines."

ARTICLE VIII
AMENDMENTS

These bylaws may be altered, amended or repealed or new bylaws may be adopted by the stockholders or by the Board of Directors, when such power is conferred upon the Board of Directors by the certificate of incorporation at any regular meeting of the stockholders or of the Board of Directors or at any special meeting of the stockholders or of the Board of Directors if notice of such alteration, amendment, repeal or adoption of new bylaws be contained in the notice of such special meeting. If the power to adopt, amend or repeal bylaws is conferred upon the Board of Directors by the certificate or incorporation it shall not divest or limit the power of the stockholders to adopt, amend or repeal bylaws.

Exhibit 4.4

THE SECURITIES REPRESENTED BY THIS INSTRUMENT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE, AND MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER SUCH ACT AND/OR APPLICABLE STATE SECURITIES LAWS, OR UNLESS THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL OR OTHER EVIDENCE, REASONABLY SATISFACTORY TO THE COMPANY AND ITS COUNSEL, THAT SUCH REGISTRATION IS NOT REQUIRED.

Warrant No. WP-11

EXAGEN DIAGNOSTICS, INC.

COMMON STOCK PURCHASE WARRANT

THIS CERTIFIES that (the "Holder") is entitled, upon the terms and subject to the conditions hereinafter set forth, at any time on or after the date of this warrant (this "Warrant") and on or prior to (the "Expiration Date"), but not thereafter, to subscribe for and purchase from Exagen Diagnostics, Inc., a Delaware corporation (the "Company"), ( ) shares of Common Stock in the Company (the "Shares") at an exercise price of $ per share (the "Exercise Price").

1. Exercise of Warrant.

(a) Unless earlier terminated under Section 7, the purchase rights represented by this Warrant to purchase Shares are exercisable, in whole or in part, before the close of business on the Expiration Date, by the surrender of this Warrant and the Notice of Exercise annexed hereto duly executed at the principal executive office of the Company (or such other office or agency of the Company as it may designate by notice in writing to the Holder at the address of the Holder appearing on the books of the Company), and upon payment of the Exercise Price of the Shares thereby purchased (by cash or by check or bank draft payable to the order of the Company in an amount equal to the Exercise Price of the shares thereby purchased).

(b) Unless earlier terminated under Section 7, in lieu of exercising this Warrant by payment of cash or check pursuant to Section 1(a), the Holder may elect to receive Shares equal to the value of this Warrant (or the portion thereof being exercised), by surrender of this Warrant at the principal executive office of the Company, together with the Notice of Conversion annexed hereto, in which event the Company will issue to the Holder Shares in accordance with the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where, X = the number of Shares to be issued to Holder;

Y = the number of Shares for which the Warrant is being exercised;

A = the fair market value of one Share; and

B = the Exercise Price.

For purposes of this Section 1(b), the fair market value of a Share shall be the price per Share that the Company could obtain from a willing buyer for Shares sold by the Company from authorized but unissued Shares, as such price shall be determined in good faith by the Company's Board of Directors. If the Shares are traded on the over-the-counter market or on an exchange, the fair market value of a Share shall be the average of the closing bid and asked prices of Shares quoted in the over-the-counter market in which the Shares are traded or the closing price quoted on any exchange on which the Shares are listed, whichever is applicable, as published in the Western Edition of The Wall Street Journal for the ten (10) trading days prior to the date of determination of fair market value (or such shorter period of time during which such stock was traded over-the-counter or on such exchange).

(c) As soon as practicable after the exercise of this Warrant in whole or in part, and in any event within ten (10) days thereafter, the Company at its expense will cause to be issued in the name of, and delivered to, the Holder, or such other name as specified on the Notice of Exercise delivered to the Company:

(i) a certificate or certificates for the number of Shares to which such Holder shall be entitled, and

(ii) in case such exercise is in part only, a Warrant or Warrants (dated the date hereof) of like tenor, calling in the aggregate on the face or faces thereof for the number of Shares equal (without giving effect to any adjustments therein) to the number of Shares called for on the face of this Warrant minus the number of such Shares purchased by the Holder upon such exercise as provide in Sections 1(a) or (b) above.

2. Shares to be Fully Paid; Reservation of Shares. The Company covenants that all Shares which may be issued upon the exercise of rights represented by this Warrant (together with all shares of Common Stock issuable upon conversion of such Shares) will, upon issuance, be duly authorized, validly issued, fully paid and nonassessable and free from all preemptive rights of any stockholder and free from all taxes, liens and charges in respect of the issue thereof. Certificates for Shares purchased hereunder shall be delivered to the Holder within a reasonable time after the date on which this Warrant shall have been exercised as aforesaid. The Company further covenants and agrees that during the period within which the rights represented by this Warrant may be exercised, the Company will at all times have authorized and reserved (or will

have provided for the ability to accomplish the same through a voting contract amongst sufficient stockholders), for the purpose of issue or transfer upon exercise of the subscription rights evidenced by this Warrant, a sufficient number of shares of authorized but unissued Shares (together with the number of shares of Common Stock issuable upon conversion of such Shares), or other securities and property, when and as required for the exercise of the rights represented by this Warrant.

3. Adjustment of Exercise Price and Number of Shares. The Exercise Price and the number of shares purchasable upon the exercise of this Warrant shall be subject to adjustment from time to time upon the occurrence of certain events described in this Section 3. Whenever the number of Shares purchasable upon the exercise of this Warrant is adjusted as herein provided the Exercise Price payable upon exercise of this Warrant shall be adjusted by multiplying the Exercise Price in effect immediately prior to such adjustment by a fraction, of which the numerator shall be the number of Shares purchasable upon the exercise of this Warrant immediately prior to such adjustment, and of which the denominator shall be the number of Shares so purchasable immediately thereafter.

(a) Conversion of Shares. If all of the outstanding Shares of the Company for which this Warrant is exercisable are converted into shares of Common Stock, the number of Shares purchasable upon exercise of this Warrant immediately prior to such conversion shall be adjusted so that the Holder of this Warrant shall be entitled to receive the number of shares of Common Stock which the Holder would have owned or have been entitled to receive had this Warrant been exercised immediately prior to such conversion and the Shares received thereupon had been simultaneously converted into shares of Common Stock immediately prior to such event.

(b) Dilutive Issuances. The Holder of this Warrant shall be entitled to the benefit of all adjustments in the number of shares of Common Stock of the Company issuable upon conversion of the Shares of the Company which occur after the date of this Warrant and prior to the exercise of this Warrant, including, without limitation, any increase in the number of shares of Common Stock issuable upon conversion as a result of a dilutive issuance of capital stock.

(c) Split, Subdivision or Combination of Shares. If the Company at any time while this Warrant, or any portion hereof, remains outstanding and unexpired shall split, subdivide or combine the Shares, into a different number of securities of the same class, the number of Shares purchasable upon exercise of this Warrant immediately prior thereto shall be adjusted so that the holder of this Warrant shall be entitled to receive the kind and number of Shares or other securities of the Company which the Holder would have owned or have been entitled to receive after the happening of any of the events described above, had this Warrant been exercised immediately prior to the happening of such event or any record date with respect thereto. An adjustment made pursuant to this Section 3(c) shall become effective immediately after the effective date of such event retroactive to the record date, if any, for such event.

(d) Reclassification. If the Company, at any time while this Warrant, or any portion hereof, remains outstanding and unexpired by reclassification of securities or otherwise, shall change the Shares into the same or a different number of securities or any other class or

classes, this Warrant shall thereafter represent the right to receive the kind and number of Shares or other securities of the Company which the Holder would have owned or have been entitled to receive after the happening of the event described above, had this Warrant been exercised immediately prior to the happening of such event or any record date with respect thereto. An adjustment made pursuant to this Section 3(d) shall become effective immediately after the effective date of such event retroactive to the record date, if any, for such event.

(e) Cash Distributions. No adjustment on account of cash dividends or interest on the Shares will be made to the Exercise Price under this Warrant.

(f) De Minimus Adjustments. No adjustment in the number of Shares purchasable hereunder shall be required unless such adjustment would require an increase or decrease of at least one percent (1%) in the number of Shares purchasable upon the exercise of this Warrant; provided, however, that any adjustments which by reason of this Section 3(f) are not required to be made shall be carried forward and taken into account in any subsequent adjustment. All calculations shall be made to the nearest cent and to the nearest one-hundredth of a Share, as the case may be.

(g) Notice of Adjustment. Upon any adjustment of the Exercise Price or any increase or decrease in the number of shares purchasable upon the exercise of this Warrant, the Company shall give written notice thereof, by first class mail postage prepaid, addressed to the registered Holder of this Warrant at the address of such Holder as shown on the books of the Company. The notice shall be signed by the Company's chief financial officer and shall state the Exercise Price resulting from such adjustment and the increase or decrease, if any, in the number of shares purchasable at such price upon the exercise of this Warrant, setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based.

(h) Other Notices. If at any time:

(i) The Company shall declare any cash dividend upon its Shares (or Common Stock issuable upon conversion thereof);

(ii) There shall be any acquisition or capital reorganization or reclassification of the capital stock of the Company;

(iii) There shall be a voluntary or involuntary dissolution, liquidation or winding-up of the Company; or

(iv) There shall be an initial public offering of the Company's securities;

then, in any one or more of said cases, the Company shall give, by first class mail, postage prepaid, addressed to the Holder of this Warrant at the address of such Holder as shown on the books of the Company, (a) at least ten (10) days prior written notice of the date on which the books of the Company shall close or a record shall be taken for such dividend or for determining rights to vote in respect of any such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up or public offering, and (b) in the case of any such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up or public offering, at least

ten (10) days prior written notice of the date when the same shall take place; provided, however, that the Holder shall make a best efforts attempt to respond to such notice as early as possible after the receipt thereof. Any notice given in accordance with the foregoing clause (a) shall also specify, in the case of any such dividend, the date on which the holders of Shares (or Common Stock issuable upon conversion thereof) shall be entitled thereto. Any notice given in accordance with the foregoing clause (b) shall also specify the date on which the holders of Shares (or Common Stock issuable upon conversion thereof) shall be entitled to exchange their Shares (or Common Stock issuable upon conversion thereof) for securities or other property deliverable upon such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up, conversion or public offering, as the case may be.

4. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. With respect to any fraction of a share called for upon the exercise of this Warrant, an amount equal to such fraction multiplied by the then current price at which each Share may be purchased hereunder shall be paid in cash to the Holder.

5. Charges, Taxes and Expenses. Issuance of certificates for Shares upon the exercise of this Warrant shall be made without charge to the Holder hereof for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder or such other name as specified on the Notice of Exercise delivered to the Company.

6. No Rights as Stockholders. This Warrant does not entitle the Holder to any voting rights or other rights as a stockholder of the Company prior to the exercise thereof.

7. Early Termination on Merger, Initial Public Offering, etc. If at any time the Company proposes to merge, reorganize or consolidate with or into any other entity, sell all or substantially all of the assets of the Company, effect any other transaction or series of related transactions in which the holders of the Company's capital stock immediately prior to the consummation of such transaction(s) hold less than fifty percent (50%) of the voting power of the surviving entity (or its parent), or conduct an initial public offering of its capital stock, then the Company shall give the Holder notice of such transaction pursuant to Section 3(h), and if the Warrant has not been exercised by the effective date of the transaction, the Warrant shall terminate.

8. Loss, Theft, Destruction or Mutilation of Warrant. Upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it, and upon reimbursement to the Company of all reasonable expenses incidental thereto, and upon surrender and cancellation of this Warrant, if mutilated, the Company will make and deliver a new warrant of like tenor and dated as of such cancellation, in lieu of this Warrant.

9. Miscellaneous.

(a) Issue Date. The provisions of this Warrant shall be construed and shall be given effect in all respects as if it had been issued and delivered by the Company on the date set forth below.

(b) Governing Law. THIS WARRANT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF DELAWARE WITHOUT REGARD TO CONFLICTS OF LAWS PRINCIPLES.

(c) Restrictions. By acceptance hereof, the Holder acknowledges that the Shares acquired upon the exercise of this Warrant may have restrictions upon their resale imposed by state and federal securities laws, and that certain 2008 Stockholders' Agreement, as amended.

(d) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday or a Sunday or shall be a legal holiday, then such action may be taken or such right may be exercised on the next succeeding day not a Saturday, Sunday or legal holiday.

(e) Waivers and Amendments. Any provision of this Warrant may be amended and the observance of any term of this Warrant may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and the Holder.

(f) Assignment. This Warrant may be assigned or transferred by the Holder only with the prior written approval of the Company.

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized.

Dated:

EXAGEN DIAGNOSTICS, INC.

By: _____

NOTICE OF EXERCISE

TO: Exagen Diagnostics, Inc.
801 University, S.E., Suite 209
Albuquerque, New Mexico 87106
ATTN: Secretary

1. The undersigned hereby elects to purchase shares of Common Stock (the "Shares") of Exagen Diagnostics, Inc. pursuant to the terms of the attached Warrant, and tenders herewith payment of the purchase price in full.

2. Please issue a certificate or certificates representing the Shares in the name of the undersigned or in such other name as is specified below:

_____
(Print Name)

Address: _____

_____

3. The undersigned confirms that the Shares are being acquired for the account of the undersigned for investment only and not with a view to, or for resale in connection with, the distribution thereof and that the undersigned has no present intention of distributing or selling the Shares.

_____
(Date)

_____
(Signature)

_____
(Print Name)

Exhibit 4.5

THE SECURITIES REPRESENTED BY THIS INSTRUMENT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE, AND MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER SUCH ACT AND/OR APPLICABLE STATE SECURITIES LAWS, OR UNLESS THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL OR OTHER EVIDENCE, REASONABLY SATISFACTORY TO THE COMPANY AND ITS COUNSEL, THAT SUCH REGISTRATION IS NOT REQUIRED.

Warrant No.

EXAGEN DIAGNOSTICS, INC.

PREFERRED STOCK PURCHASE WARRANT

THIS CERTIFIES that (the "Holder") is entitled, upon the terms and subject to the conditions hereinafter set forth, at any time on or after the date of this warrant (this "Warrant") and on or prior to (the "Expiration Date"), but not thereafter, to subscribe for and purchase from Exagen Diagnostics, Inc., a Delaware corporation (the "Company"), ( ) shares of Series D Convertible Preferred Stock in the Company (the "Shares") at an exercise price of $ per share (the "Exercise Price").

1. Exercise of Warrant.

(a) Unless earlier terminated under Section 7, the purchase rights represented by this Warrant to purchase Shares are exercisable, in whole or in part, before the close of business on the Expiration Date, by the surrender of this Warrant and the Notice of Exercise annexed hereto duly executed at the principal executive office of the Company (or such other office or agency of the Company as it may designate by notice in writing to the Holder at the address of the Holder appearing on the books of the Company), and upon payment of the Exercise Price of the Shares thereby purchased (by cash or by check or bank draft payable to the order of the Company in an amount equal to the Exercise Price of the shares thereby purchased).

(b) Unless earlier terminated under Section 7, in lieu of exercising this Warrant by payment of cash or check pursuant to Section 1(a), the Holder may elect to receive Shares equal to the value of this Warrant (or the portion thereof being exercised), by surrender of this Warrant at the principal executive office of the Company, together with the Notice of Conversion annexed hereto, in which event the Company will issue to the Holder Shares in accordance with the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where, X = the number of Shares to be issued to Holder;

Y = the number of Shares for which the Warrant is being exercised;

A = the fair market value of one Share; and

B = the Exercise Price.

For purposes of this Section 1(b), the fair market value of a Share shall be the price per Share that the Company could obtain from a willing buyer for Shares sold by the Company from authorized but unissued Shares, as such price shall be determined in good faith by the Company's Board of Directors. If the Shares are traded on the over-the-counter market or on an exchange, the fair market value of a Share shall be the average of the closing bid and asked prices of Shares quoted in the over-the-counter market in which the Shares are traded or the closing price quoted on any exchange on which the Shares are listed, whichever is applicable, as published in the Western Edition of The Wall Street Journal for the ten (10) trading days prior to the date of determination of fair market value (or such shorter period of time during which such stock was traded over-the-counter or on such exchange).

(c) As soon as practicable after the exercise of this Warrant in whole or in part, and in any event within ten (10) days thereafter, the Company at its expense will cause to be issued in the name of, and delivered to, the Holder, or such other name as specified on the Notice of Exercise delivered to the Company:

(i) a certificate or certificates for the number of Shares to which such Holder shall be entitled, and

(ii) in case such exercise is in part only, a Warrant or Warrants (dated the date hereof) of like tenor, calling in the aggregate on the face or faces thereof for the number of Shares equal (without giving effect to any adjustments therein) to the number of Shares called for on the face of this Warrant minus the number of such Shares purchased by the Holder upon such exercise as provide in Sections 1(a) or (b) above.

2. Shares to be Fully Paid; Reservation of Shares. The Company covenants that all Shares which may be issued upon the exercise of rights represented by this Warrant (together with all shares of Common Stock issuable upon conversion of such Shares) will, upon issuance, be duly authorized, validly issued, fully paid and nonassessable and free from all preemptive rights of any stockholder and free from all taxes, liens and charges in respect of the issue thereof. Certificates for Shares purchased hereunder shall be delivered to the Holder within a reasonable time after the date on which this Warrant shall have been exercised as aforesaid. The Company further covenants and agrees that during the period within which the rights represented by this Warrant may be exercised, the Company will at all times have authorized and reserved (or will

have provided for the ability to accomplish the same through a voting contract amongst sufficient stockholders), for the purpose of issue or transfer upon exercise of the subscription rights evidenced by this Warrant, a sufficient number of shares of authorized but unissued Shares (together with the number of shares of Common Stock issuable upon conversion of such Shares), or other securities and property, when and as required for the exercise of the rights represented by this Warrant.

3. Adjustment of Exercise Price and Number of Shares. The Exercise Price and the number of shares purchasable upon the exercise of this Warrant shall be subject to adjustment from time to time upon the occurrence of certain events described in this Section 3. Whenever the number of Shares purchasable upon the exercise of this Warrant is adjusted as herein provided the Exercise Price payable upon exercise of this Warrant shall be adjusted by multiplying the Exercise Price in effect immediately prior to such adjustment by a fraction, of which the numerator shall be the number of Shares purchasable upon the exercise of this Warrant immediately prior to such adjustment, and of which the denominator shall be the number of Shares so purchasable immediately thereafter.

(a) Conversion of Shares. If all of the outstanding Shares of the Company for which this Warrant is exercisable are converted into shares of Common Stock, the number of Shares purchasable upon exercise of this Warrant immediately prior to such conversion shall be adjusted so that the Holder of this Warrant shall be entitled to receive the number of shares of Common Stock which the Holder would have owned or have been entitled to receive had this Warrant been exercised immediately prior to such conversion and the Shares received thereupon had been simultaneously converted into shares of Common Stock immediately prior to such event.

(b) Dilutive Issuances. The Holder of this Warrant shall be entitled to the benefit of all adjustments in the number of shares of Common Stock of the Company issuable upon conversion of the Shares of the Company which occur after the date of this Warrant and prior to the exercise of this Warrant, including, without limitation, any increase in the number of shares of Common Stock issuable upon conversion as a result of a dilutive issuance of capital stock.

(c) Split, Subdivision or Combination of Shares. If the Company at any time while this Warrant, or any portion hereof, remains outstanding and unexpired shall split, subdivide or combine the Shares, into a different number of securities of the same class, the number of Shares purchasable upon exercise of this Warrant immediately prior thereto shall be adjusted so that the holder of this Warrant shall be entitled to receive the kind and number of Shares or other securities of the Company which the Holder would have owned or have been entitled to receive after the happening of any of the events described above, had this Warrant been exercised immediately prior to the happening of such event or any record date with respect thereto. An adjustment made pursuant to this Section 3(c) shall become effective immediately after the effective date of such event retroactive to the record date, if any, for such event.

(d) Reclassification. If the Company, at any time while this Warrant, or any portion hereof, remains outstanding and unexpired by reclassification of securities or otherwise, shall change the Shares into the same or a different number of securities or any other class or

classes, this Warrant shall thereafter represent the right to receive the kind and number of Shares or other securities of the Company which the Holder would have owned or have been entitled to receive after the happening of the event described above, had this Warrant been exercised immediately prior to the happening of such event or any record date with respect thereto. An adjustment made pursuant to this Section 3(d) shall become effective immediately after the effective date of such event retroactive to the record date, if any, for such event.

(e) Cash Distributions. No adjustment on account of cash dividends or interest on the Shares will be made to the Exercise Price under this Warrant.

(f) De Minimus Adjustments. No adjustment in the number of Shares purchasable hereunder shall be required unless such adjustment would require an increase or decrease of at least one percent (1%) in the number of Shares purchasable upon the exercise of this Warrant; provided, however, that any adjustments which by reason of this Section 3(f) are not required to be made shall be carried forward and taken into account in any subsequent adjustment. All calculations shall be made to the nearest cent and to the nearest one-hundredth of a Share, as the case may be.

(g) Notice of Adjustment. Upon any adjustment of the Exercise Price or any increase or decrease in the number of shares purchasable upon the exercise of this Warrant, the Company shall give written notice thereof, by first class mail postage prepaid, addressed to the registered Holder of this Warrant at the address of such Holder as shown on the books of the Company. The notice shall be signed by the Company's chief financial officer and shall state the Exercise Price resulting from such adjustment and the increase or decrease, if any, in the number of shares purchasable at such price upon the exercise of this Warrant, setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based.

(h) Other Notices. If at any time:

(i) The Company shall declare any cash dividend upon its Shares (or Common Stock issuable upon conversion thereof);

(ii) There shall be any acquisition or capital reorganization or reclassification of the capital stock of the Company;

(iii) There shall be a voluntary or involuntary dissolution, liquidation or winding-up of the Company; or

(iv) There shall be an initial public offering of the Company's securities;

then, in any one or more of said cases, the Company shall give, by first class mail, postage prepaid, addressed to the Holder of this Warrant at the address of such Holder as shown on the books of the Company, (a) at least ten (10) days prior written notice of the date on which the books of the Company shall close or a record shall be taken for such dividend or for determining rights to vote in respect of any such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up or public offering, and (b) in the case of any such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up or public offering, at least

ten (10) days prior written notice of the date when the same shall take place; provided, however, that the Holder shall make a best efforts attempt to respond to such notice as early as possible after the receipt thereof. Any notice given in accordance with the foregoing clause (a) shall also specify, in the case of any such dividend, the date on which the holders of Shares (or Common Stock issuable upon conversion thereof) shall be entitled thereto. Any notice given in accordance with the foregoing clause (b) shall also specify the date on which the holders of Shares (or Common Stock issuable upon conversion thereof) shall be entitled to exchange their Shares (or Common Stock issuable upon conversion thereof) for securities or other property deliverable upon such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up, conversion or public offering, as the case may be.

4. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. With respect to any fraction of a share called for upon the exercise of this Warrant, an amount equal to such fraction multiplied by the then current price at which each Share may be purchased hereunder shall be paid in cash to the Holder.

5. Charges, Taxes and Expenses. Issuance of certificates for Shares upon the exercise of this Warrant shall be made without charge to the Holder hereof for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder or such other name as specified on the Notice of Exercise delivered to the Company.

6. No Rights as Stockholders. This Warrant does not entitle the Holder to any voting rights or other rights as a stockholder of the Company prior to the exercise thereof.

7. Early Termination on Merger, Initial Public Offering, etc. If at any time the Company proposes to merge, reorganize or consolidate with or into any other entity, sell all or substantially all of the assets of the Company, effect any other transaction or series of related transactions in which the holders of the Company's capital stock immediately prior to the consummation of such transaction(s) hold less than fifty percent (50%) of the voting power of the surviving entity (or its parent), or conduct an initial public offering of its capital stock, then the Company shall give the Holder notice of such transaction pursuant to Section 3(h), and if the Warrant has not been exercised by the effective date of the transaction, the Warrant shall terminate.

8. Loss, Theft, Destruction or Mutilation of Warrant. Upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it, and upon reimbursement to the Company of all reasonable expenses incidental thereto, and upon surrender and cancellation of this Warrant, if mutilated, the Company will make and deliver a new warrant of like tenor and dated as of such cancellation, in lieu of this Warrant.

9. Miscellaneous.

(a) Issue Date. The provisions of this Warrant shall be construed and shall be given effect in all respects as if it had been issued and delivered by the Company on the date set forth below.

(b) Governing Law. THIS WARRANT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF DELAWARE WITHOUT REGARD TO CONFLICTS OF LAWS PRINCIPLES.

(c) Restrictions. By acceptance hereof, the Holder acknowledges that the Shares acquired upon the exercise of this Warrant may have restrictions upon their resale imposed by state and federal securities laws, and that certain 2008 Stockholders' Agreement, as amended.

(d) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday or a Sunday or shall be a legal holiday, then such action may be taken or such right may be exercised on the next succeeding day not a Saturday, Sunday or legal holiday.

(e) Waivers and Amendments. Any provision of this Warrant may be amended and the observance of any term of this Warrant may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and the Holder.

(f) Assignment. This Warrant may be assigned or transferred by the Holder only with the prior written approval of the Company.

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized.

Dated:

EXAGEN DIAGNOSTICS, INC.

By: _____

NOTICE OF EXERCISE

TO: Exagen Diagnostics, Inc.
801 University, S.E., Suite 209
Albuquerque, New Mexico 87106
ATTN: Secretary

1. The undersigned hereby elects to purchase shares of Series D Convertible Preferred Stock (the "Shares") of Exagen Diagnostics, Inc. pursuant to the terms of the attached Warrant, and tenders herewith payment of the purchase price in full.

2. Please issue a certificate or certificates representing the Shares in the name of the undersigned or in such other name as is specified below:

_____
(Print Name)

Address: _____

_____

3. The undersigned confirms that the Shares are being acquired for the account of the undersigned for investment only and not with a view to, or for resale in connection with, the distribution thereof and that the undersigned has no present intention of distributing or selling the Shares.

_____
(Date)

_____
(Signature)

_____
(Print Name)

THIS WARRANT AND THE SECURITIES ISSUABLE UPON THE EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY STATE SECURITIES LAWS. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED IN THE ABSENCE OF A REGISTRATION STATEMENT IN EFFECT WITH RESPECT TO THE SECURITIES UNDER THE SECURITIES ACT OR AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED OR UNLESS SOLD PURSUANT TO AN EXEMPTION TO THE SECURITIES ACT.

THE SALE OF THE SECURITIES WHICH ARE THE SUBJECT OF THIS WARRANT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA OR ANY OTHER STATE AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION FOR SUCH SECURITIES PRIOR TO SUCH QUALIFICATION IS UNLAWFUL, UNLESS THE SALE OF SUCH SECURITIES IS EXEMPT FROM QUALIFICATION BY SECTION 2511, 25102 OR 25105 OF THE CALIFORNIA CORPORATIONS CODE OR SUCH PROVISIONS OF THE CORPORATIONS CODE OF ANY SUCH OTHER STATE. THE RIGHTS OF THE HOLDER OF THIS WARRANT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED, UNLESS THE SALE IS SO EXEMPT.

Void after
October [ ], 2020

WARRANT TO PURCHASE SHARES
OF PREFERRED STOCK

of

EXAGEN DIAGNOSTICS, INC.

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

THIS CERTIFIES THAT, for value received, **_____,** together with its permitted successors and assigns ("***Holder***") is entitled, subject to the terms set forth below, to subscribe for and purchase shares of a series of Preferred Stock (the "***Preferred Stock***") of Exagen Diagnostics, Inc., a Delaware corporation (the "***Company***"), subject to adjustment as provided herein. This warrant and any warrant subsequently issued upon exchange or transfer hereof are hereinafter referred to collectively as the "***Warrant***." This Warrant is one of a series of warrants issued pursuant to that certain Note and Warrant Purchase Agreement dated October [ ], 2015 by and among the Company and the entities and persons listed on the Schedule of Investors thereto (the "***Purchase Agreement***"), and the Holder and the Company shall be bound by all the terms, conditions and provisions of the Purchase Agreement.

This Warrant is subject to the following terms and conditions:

1. Convertible Promissory Note. This Warrant is issued in connection with that certain Convertible Promissory Note dated October [ ], 2015 (the "***Note***") by the Company in favor of Holder. All capitalized terms used but not defined in this Warrant shall have the meanings ascribed thereto in the Note.

2. Exercise of Warrant. The terms and conditions upon which this Warrant may be exercised, and the shares covered hereby may be purchased, are as follows:

2.1 Term. Subject to the terms hereof and unless sooner terminated as provided below in Section 7.3, this Warrant may be exercised at any time after the date hereof, or from time to time, in whole or in part; provided, however, that in no event may this Warrant be exercised (the "***Exercise Date***") later than 5:00 p.m. (Pacific Time) on the close of business on October [ ], 2020 (the "***Exercise Period***").

2.2 Number of Shares. This Warrant may be exercised for a number of Shares, as defined below, as set forth below:

2.2.1 Equity Financing. In the event (a) the Company completes a Qualified Equity Financing (as defined below) or (b) the Note is converted into equity securities of the Company in accordance with Sections 4(b) or 4(c) of the Note, the number of Shares subject to this Warrant will be equal to the following:

$$A = \frac{.20(B)}{C}$$

Where:

A = The number of Shares that may be purchased by Holder pursuant to this Warrant.

B = The original principal amount of the Note held by Holder.

C = The Exercise Price (as defined below) for the Shares.

The term "***Qualified Equity Financing***" shall mean an equity financing after the date hereof which results in aggregate gross proceeds to the Company of at least Ten Million Dollars ($10,000,000), excluding the conversion of the Notes, and in which investors purchase shares of a newly authorized series of the Company's Preferred Stock and in which the Notes are converted into Shares.

The term "***Shares***" shall mean (a) if a Qualified Equity Financing occurs, the shares of Preferred Stock sold in the Qualified Equity Financing (the "***New Preferred Stock***"), or (b) if the Note has been converted into the Company's Series D Preferred Stock, par value $0.001 per share (the "***Series D Preferred Stock***"), pursuant to Sections 4(b)(i), 4(b)(ii)(A), 4(b)(iii) or 4(c) of the Note, such Series D Preferred Stock, in each case, subject to further adjustment as provided herein. The Company agrees to use commercially reasonable efforts to obtain the requisite approvals to authorize sufficient Series D Preferred Stock in the event the Shares issuable upon exercise of this Warrant are shares of Series D Preferred Stock.

2.3 Exercise Price. The "***Exercise Price***" shall be equal to (a) in case that the Shares being purchased upon exercise of this Warrant are shares of New Preferred Stock, the lowest price per share paid by investors for such New Preferred Stock and (b) in the case that the Shares being purchased upon exercise of this Warrant are shares of Series D Preferred Stock, the then applicable Conversion Price (as defined in the Company's Fifteenth Amended and Restated Certificate of Incorporation, as the same may be amended from time to time), in each case, subject to adjustment as provided herein.

2.4 Method of Exercise. Subject to the terms and conditions contained herein and while this Warrant remains outstanding and exercisable, from and after the Qualified Equity Financing or conversion of the Note, as applicable, this Warrant is exercisable with respect to any or all of the Shares, at the option of Holder, upon surrender of this Warrant to the Company together with (a) a duly completed (i) Notice of Exercise, in the form attached hereto as Exhibit A, or (ii) Net Issue Election Notice, in the form attached hereto as Exhibit B and (b) payment of an amount equal to the Exercise Price multiplied by the number of Shares with respect to which this Warrant is being exercised as provided in Section 2.5 below. If Holder exercises this Warrant with respect to less than all of the Shares represented by this Warrant, the Company shall cancel this Warrant upon the surrender thereof and shall execute and deliver to Holder a new Warrant for the balance of such Shares.

2.5 Payment. Payment of the Exercise Price for the Shares with respect to which this Warrant is being exercised by Holder shall be made, at the option of Holder, (a) by delivery of cash payable by wire transfer of immediately available funds, (b) by the delivery of a cashier's check or certified check, (c) by net issue election as set forth in Section 2.6 below, or (d) by any combination of (a) – (c).

2.6 Net Issue Election Holder may elect to receive, without payment by Holder of any additional consideration, Shares equal to the value of the "spread" on the Shares or any portion thereof by the surrender of the Warrant to the Company, together with a duly completed Net Issue Election Notice, in the form attached hereto as Exhibit B, at the principal office of the Company, in which event the Company shall issue to Holder such number of Shares as is computed using the following formula:

$$X = \frac{Y\,(A - B)}{A}$$

Where: X = The number of Shares to be issued to Holder pursuant to the net issue election;

Y = The number of Shares in respect of which the net issue election is made;

A = The fair market value (as determined below) of one Share at the time the net issue election is made;

B = The Exercise Price in effect under this Warrant as of the date of the net issue election.

For purposes of this Section 2.6, the fair market value of one Share as of a particular date shall be as determined in good faith by the Board of Directors of the Company.

3. Adjustment of Exercise Price and Number of Shares. The Exercise Price and the number and kind of Shares purchasable upon the exercise of this Warrant shall be subject to adjustment from time to time upon the happening of certain events as follows:

3.1 Conversion of Shares into Common Stock. Upon conversion of all of the issued and outstanding shares of the Company's Preferred Stock into Common Stock ("***Common Stock***"), this Warrant shall be automatically exercisable only for such number of shares of Common Stock as Holder would have received had this Warrant been exercised in full for the Shares and then converted into Common Stock on the date all issued and outstanding shares of the Company's Preferred Stock converted into Common Stock. The Exercise Price in effect immediately prior to such conversion shall,

concurrently with the effectiveness of such conversion, be proportionally adjusted. Upon such conversion of the Preferred Stock into Common Stock, all references under this Warrant to Shares shall be deemed references to Common Stock.

3.2 Split, Subdivision or Combination. If the Company should at any time or from time to time fix a record date for (a) the effectuation of a split or subdivision of the outstanding Shares or (b) the determination of Holders of Shares entitled to receive a dividend or other distribution payable in additional Shares or other securities or rights convertible into, or entitling Holder thereof to receive directly or indirectly, additional Shares (hereinafter referred to as the "***Share Equivalents***"), without payment of any consideration by such holder for the additional Shares or Share Equivalents, then, as of such record date (or the date of such distribution, split or subdivision if no record date is fixed), the Exercise Price shall be appropriately decreased and the number of Shares which this Warrant is exercisable for, if any, shall be appropriately increased in proportion to such increase of outstanding shares. Notwithstanding the foregoing, in any such case, the aggregate purchase price payable by Holder for the total number of Shares (as adjusted) shall remain the same.

3.3 Combination of Shares. If the number of Shares outstanding at any time after the date hereof is decreased by a combination of the outstanding Shares, the Exercise Price shall be appropriately increased and the number of Shares for which this Warrant is exercisable, if any, shall be appropriately decreased in proportion to such decrease in outstanding shares. Notwithstanding the foregoing, in any such case, the aggregate purchase price payable by Holder for the total number of Shares (as adjusted) shall remain the same.

3.4 Reclassification or Reorganization. If the Shares shall be changed into the same or different number of shares of any class or classes of stock, whether by capital reorganization, reclassification or otherwise (other than a subdivision, conversion or combination of shares or stock dividend provided for in Sections 3.1, 3.2 and 3.3 above), then and in each such event Holder shall be entitled to receive upon the exercise of this Warrant the kind and amount of shares of stock and other securities and property receivable upon such reorganization, reclassification or other change, to which a holder of the number of Shares (or any shares of stock or other securities which may be) issuable upon the exercise of this Warrant would have received if this Warrant had been exercised immediately prior to such reorganization, reclassification or other change, all subject to further adjustment as provided herein. At the request of Holder, this Warrant will thereupon be cancelled and upon its surrender to the Company, the Company will execute and deliver at its expense a new Warrant reflecting the foregoing adjustment, but otherwise identical to the replaced Warrant.

3.5 Notice of Adjustments and Record Dates. The Company shall promptly notify Holder in writing of each adjustment or readjustment of the Exercise Price hereunder and the number of Shares issuable upon the exercise of this Warrant. Such notice shall state the adjustment or readjustment and show in reasonable detail the facts on which that adjustment or readjustment is based. In the event of any taking by the Company of a record of holders of Shares for the purpose of determining holders thereof who are entitled to receive any dividend or other distribution, the Company shall notify Holder in writing of such record date at least twenty (20) days prior to the date specified therein.

3.6 Fractional Shares. No fractional shares shall be issued upon the exercise of this Warrant as a consequence of any adjustment pursuant hereto. All Shares (including fractions) issuable upon exercise of this Warrant may be aggregated for purposes of determining whether the exercise would result in the issuance of a fractional share. If, after aggregation, the exercise would result in the issuance of a fractional share, the Company shall, in lieu of issuance of any fractional share, pay Holder otherwise entitled to such fraction a sum in cash equal to the product resulting from multiplying the then current fair market value of a Share by such fraction.

3.7 Issue Tax. The issuance of certificates for the Shares upon exercise of this Warrant shall be made without charge to Holder for any issuance tax in respect thereof provided that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than that of Holder.

3.8 No Impairment. The Company shall not avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Company, but shall at all times in good faith assist in the carrying out of all the provisions of this Warrant. Without limiting the generality of the foregoing, the Company shall take all such action as may be necessary or appropriate in order that all shares of Shares as may be issued pursuant to the exercise of this Warrant shall, upon issuance, be duly and validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issue thereof.

4. Replacement of Warrants. On receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of any such loss, theft or destruction of this Warrant, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of any such mutilation, on surrender and cancellation of such Warrant, the Company at its expense shall execute and deliver to Holder, in lieu thereof, a new Warrant of like tenor.

5. No Rights or Liability as a Stockholder. This Warrant does not entitle Holder hereof to any voting rights or other rights as a stockholder of the Company. No provisions hereof, in the absence of affirmative action by Holder to purchase Shares, and no enumeration herein of the rights or privileges of Holder, shall give rise to any liability of Holder as a shareholder of the Company.

6. Registration Rights. The Shares issuable upon exercise of this Warrant shall be entitled to registration rights and all other rights as applicable to Common Stock issuable upon conversion of New Equity Shares under any investors' rights agreement entered into between the Company and the holders of New Equity Shares.

7. Miscellaneous.

7.1 Limitations on Disposition. Holder agrees not to make any disposition of this Warrant or any Shares, unless and until (i) the transferee has agreed in writing for the benefit of the Company to be bound by this Section 7.1 and the other provisions of this Warrant as if such transferee were the original Holder hereof, provided and to the extent such provisions are then applicable, and (ii) (A) there is then in effect a registration statement under the Securities Act of 1933, as amended (the "***Securities Act***"), covering such proposed disposition and such disposition is made in accordance with such registration statement, or (B) Holder shall have notified the Company of the proposed disposition and shall have furnished the Company with a detailed description of the manner and circumstances of the proposed disposition, and, if requested by the Company, such Holder shall have furnished the Company, at its expense, with either (x) an opinion of counsel, reasonably satisfactory to the Company, to the effect that such disposition will not require registration of such Securities under the Securities Act or (y) a "no action" letter from the Securities and Exchange Commission to the effect that the transfer of such securities without registration will not result in a recommendation by the staff of the Securities and Exchange Commission that action be taken with respect thereto, whereupon the holder of such Securities shall be entitled to transfer such Securities in accordance with the terms of the notice delivered by Holder to the Company. It is agreed that the Company will not require opinions of counsel for transactions made pursuant to Rule 144 under the Securities Act except in unusual circumstances.

7.2 Permitted Transfers. Notwithstanding the provisions of Section 7.1 above, no such registration statement, prior consent or opinion of counsel shall be necessary for (i) a transfer not involving a change in beneficial ownership, or (ii) in transactions involving the distribution without consideration by any Holder to (x) a parent, subsidiary or other affiliate of Holder that is a corporation, (y) any of its partners, members or other equity owners, or retired partners, retired members or other equity owners, or to the estate of any of its partners, members or other equity owners or retired partners, retired members or other equity owners, or (z) a venture capital fund that is controlled by or under common control with one or more general partners or managing members of, or shares the same management company with, such Holder, or (iii) transfers in compliance with Rule 144 under the Securities Act, as long as the Company is furnished with satisfactory evidence of compliance with such Rule; provided, in each case, that Holder thereof shall give written notice to the Company of such Holder's intention to effect such disposition and shall have furnished the Company with a detailed description of the manner and circumstances of the proposed disposition. Each new certificate evidencing this Warrant and/or the Shares so transferred shall bear the appropriate restrictive legends, except that such certificate shall not bear such restrictive legend if, in the opinion of counsel for the Company, such legend is not required in order to establish or assist in compliance with any provisions of the Securities Act or any applicable state securities laws.

7.3 Early Termination. In the event of, at any time during the Exercise Period, an initial public offering of securities of the Company registered under the Securities Act, or any capital reorganization, or any reclassification of the capital stock of the Company (other than a change in par value or from par value to no par value or no par value to par value or as a result of a stock dividend or subdivision, split-up or combination of shares), or the consolidation or merger of the Company with or into another corporation (other than a merger solely to effect a reincorporation of the Company into another state), or the sale or other disposition of all or substantially all the properties and assets of the Company in its entirety to any other person, the Company shall provide to Holder ten (10) days advance written notice of such public offering, reorganization, reclassification, consolidation, merger or sale or other disposition of the Company's assets, and this Warrant shall terminate unless exercised prior to the date such public offering is closed or the occurrence of such reorganization, reclassification, consolidation, merger or sale or other disposition of the Company's assets.

8. Titles and Subtitles. The titles and subtitles used in this Warrant are for convenience only and are not to be considered in construing or interpreting this Warrant.

9. Notices. All notices and other communications under this Warrant shall be in writing and shall be deemed given upon receipt if delivered personally, or when sent if mailed by registered or certified mail (return receipt requested) or by reputable overnight express courier (charges prepaid) or transmitted by facsimile (with confirmation of transmittal) to the party to be notified at the address indicated for such party on the signature page hereof, or at such other address as such party may designate by advance written notice to the other parties.

10. Attorneys' Fees. If any action at law or in equity is necessary to enforce or interpret the terms of this Warrant, the prevailing party shall be entitled to reasonable attorneys' fees, costs and disbursements in addition to any other relief to which such party may be entitled.

11. Amendments and Waivers. This Warrant may be amended and the observance of any other term of this Warrant may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the holders of a majority in interest of the Shares issuable upon exercise of the Warrants issued pursuant to the Purchase Agreement. Any amendment or waiver effected in accordance with this Section 11 shall be binding upon Holder of

this Warrant (and of any Shares into which this Warrant is exercisable), and each future holder of all such securities and the Company.

12. Severability. If one or more provisions of this Warrant are held to be unenforceable under applicable law, such provision shall be excluded from this Warrant and the balance of the Warrant shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

13. Governing Law. This Warrant shall be governed by and construed and enforced in accordance with the laws of the State of Delaware, without giving effect to its conflicts of laws principles.

[SIGNATURE PAGE FOLLOWS]

This Warrant may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Date: October [ ], 2015

EXAGEN DIAGNOSTICS, INC.
a Delaware corporation

By: _____
Name: Fortunato Ron Rocca
Title: Chief Executive Officer

Address: 1261 Liberty Way
Vista, CA 92081

ACKNOWLEDGED AND AGREED:

[HOLDER]

By: _____

Name: _____

Title: _____

Address: _____

_____

_____

Fax: _____

EXHIBIT A

FORM OF NOTICE OF EXERCISE

The undersigned, the holder of the within Warrant, hereby irrevocably elects to exercise this Warrant for, and to purchase thereunder, _____ Shares (as defined in the attached Warrant)* of **EXAGEN DIAGNOSTICS, INC.**, a Delaware corporation and herewith makes payment of $_____ therefor and requests that the certificates for such shares be issued in the name of, and delivered to, _____, federal taxpayer identification number _____, whose address is _____.

In exercising this Warrant, the undersigned hereby confirms and acknowledges that the _____ Shares (as defined in the attached Warrant) are being acquired solely for the account of the undersigned and not as a nominee for any other party, and for investment, and the undersigned will not offer, sell or otherwise dispose of any such Shares except under circumstances that will not result in a violation of the Securities Act of 1933, as amended, or any state securities laws.

Please issue a new Warrant for the unexercised portion of the attached Warrant in the name of, and delivered to, _____, federal taxpayer identification number _____, whose address is _____.

Dated:_____

_____

(Signature must conform to name of holder as specified on the face of the Warrant)

* Insert here the number of shares as to which the Warrant is being exercised.

EXHIBIT B

FORM OF NET ISSUE ELECTION NOTICE

(To be signed only on net issue exercise of the Warrant)

The undersigned, the holder of the within Warrant, hereby irrevocably elects to exercise this Warrant with respect to _____ Shares (as defined in the attached Warrant) of **EXAGEN DIAGNOSTICS, INC.**, a Delaware corporation, pursuant to the net issue election provisions set forth in Section 2.6 of the Warrant and requests that the certificates for the number of Shares issuable pursuant to said Section 2.6 after application of the net issue election formula to such Shares be issued in the name of, and delivered to, _____, federal taxpayer identification number _____, whose address is _____.

In exercising this Warrant, the undersigned hereby confirms and acknowledges that the Shares are being acquired solely for the account of the undersigned and not as a nominee for any other party, and for investment, and the undersigned will not offer, sell or otherwise dispose of any such Shares except under circumstances that will not result in a violation of the Securities Act of 1933, as amended, or any state securities laws.

Please issue a new Warrant for the unexercised portion of the attached Warrant in the name of, and delivered to, _____, federal taxpayer identification number _____, whose address is _____.

Dated:_____

_____

(Signature must conform to name of holder as specified on the face of the Warrant)

Exhibit 4.7

AMENDMENT TO CONVERTIBLE PROMISSORY NOTES AND WARRANTS

This Amendment to Convertible Promissory Notes and Warrants (this "***Amendment***") is made and entered into as of January 19, 2016, by and among Exagen Diagnostics, Inc., a Delaware corporation (the "***Company***") and the parties listed on the signature pages hereto.

RECITALS

WHEREAS, the Company has sold and issued certain Convertible Promissory Notes (each, a "***Note***" and collectively, the "***Notes***") to note holders (the "***Note Holders***") pursuant to (i) that certain Note Purchase Agreement, dated as of February 19, 2015, by and among the Company and the entities and persons on the Schedule of Investors attached thereto (as the same may be amended from time to time) (each such Note issued pursuant to such agreement, as amended, a "***February Note***," and collectively, the "***February Notes***"), (ii) that certain Note Purchase Agreement, dated as of July 2, 2015, by and among the Company and the entities and persons on the Schedule of Investors attached thereto (as the same may be amended from time to time) (each such Note issued pursuant to such Agreement, as amended, a "***July Note***" and collectively, the "***July Notes***") and (iii) that certain Note and Warrant Purchase Agreement (the "***October Purchase Agreement***"), dated as of October 9, 2015, by and among the Company and the entities and persons on the Schedule of Investors attached thereto (as the same may be amended from time to time) (each such Note issued pursuant to the October Purchase Agreement, an "***October Note***" and collectively, the "***October Notes***");

WHEREAS, the Company has sold and issued certain Warrants to warrant holders (the "***Warrant Holders***," and together with the Note Holders, the "***Holders***") pursuant to the October Purchase Agreement (the "***Warrants***");

WHEREAS, on or about the date hereof, the Company will complete an equity financing (the "***Series E Financing***"), pursuant to which the Company will sell and certain of the Holders will purchase shares of the Company's Series E Preferred Stock, par value $0.001 per share (the "***Series E Preferred***");

WHEREAS, pursuant to the terms of the Notes and the Warrants, the Notes may be converted at the option of the Majority in Interest (as defined in the Notes) into equity securities sold by the Company in a Qualified Equity Financing (as defined in the Notes), and the Warrants shall be exercisable for shares of New Preferred Stock (as defined in the Warrants) in the event of a Qualified Equity Financing (as defined in the Warrants), with the Exercise Price (as defined in the Warrants) equal to the lowest price per share paid by investors for the equity securities sold in the Qualified Equity Financing and used to calculate the number of shares issuable upon exercise of the Warrants;

WHEREAS, pursuant to Section 7(b) of each of the February Notes, the February Notes may be amended with the written consent of the Company and the holders of February Notes representing more than 50% of the aggregate outstanding principal amount of the February Notes (the "***February Requisite Holders***");

WHEREAS, pursuant to Section 7(b) of each of the July Notes, the July Notes may be amended with the written consent of the Company and the holders of July Notes representing more than 50% of the aggregate outstanding principal amount of the July Notes (the "***July Requisite Holders***");

WHEREAS, pursuant to Section 7(b) of each of the October Notes, the October Notes may be amended with the written consent of the Company and the holders of October Notes representing more than 50% of the aggregate outstanding principal amount of the October Notes (the "***October Requisite Holders***");

WHEREAS, pursuant to the Section 11 of each Warrant, the Warrants may be amended and the observance of any term thereof may be waived with the written consent of the Company and the holders of a majority in interest of the Shares (as defined in the Warrants) issuable upon exercise of the Warrants (the "***Requisite Warrant Holders,***" and together with the February Requisite Holders, the July Requisite Holders and the October Requisite Holders, the "***Requisite Holders***");

WHEREAS, notwithstanding the definition of Qualified Equity Financing in the Notes and the Warrants, the Company and the Requisite Holders desire to deem the Series E Financing to be a Qualified Equity Financing under the Notes and Warrants and amend the definition thereof in the Notes and Warrants such that upon the closing of the Series E Financing, the Notes will be converted into shares of the Series E Preferred, and the Warrants shall be exercisable for shares of Series E Preferred; and

WHEREAS, the undersigned Holders collectively constitute the Requisite Holders.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, agree as follows:

ARTICLE I

AMENDMENT OF NOTES

1.1 *Section 4(b)(i) of February Notes*. Section 4(b)(i) of the February Notes is hereby amended and restated in its entirety as follows:

"(i) In the event the Company completes an equity financing which results in aggregate gross proceeds to the Company of at least Five Million Dollars ($5,000,000), excluding the conversion of the Notes, and in which investors purchase shares of a newly authorized series of the Company's Preferred Stock (a "***Qualified Equity Financing***"), the Issue Price plus all accrued and previously unpaid interest thereon shall be converted into that number of fully paid and nonassessable shares of the newly authorized series of the Company's Preferred Stock sold in the Qualified Equity Financing (the "***New Equity Shares***") as is equal to the Issue Price plus all accrued and previously unpaid interest thereon divided by the lowest price per share paid by investors for the New Equity Shares in the Qualified Equity Financing."

1.2 *Section 4(b)(i) of July Notes*. Section 4(b)(i) of the July Notes is hereby amended and restated in its entirety as follows:

"(i) In the event the Company completes an equity financing which results in aggregate gross proceeds to the Company of at least Five Million Dollars ($5,000,000), excluding the conversion of the Notes, and in which investors purchase shares of a newly authorized series of the Company's Preferred Stock (a "***Qualified Equity Financing***"), the Issue Price plus all accrued and previously unpaid interest thereon shall be converted into that number of fully paid and nonassessable shares of the newly authorized series of the Company's Preferred Stock sold in the Qualified Equity Financing (the "***New Equity Shares***") as is equal to the Issue Price plus all accrued and previously unpaid interest thereon divided by the lowest price per share paid by investors for the New Equity Shares in the Qualified Equity Financing."

1.3 *Section 4(b)(ii) of October Notes*. Section 4(b)(ii) of the October Notes is hereby amended and restated in its entirety as follows:

"(ii) In the event the Company completes an equity financing which results in aggregate gross proceeds to the Company of at least Five Million Dollars ($5,000,000), excluding the conversion of the Notes, and in which investors purchase shares of a newly authorized series of the Company's Preferred Stock (a "***Qualified Equity Financing***"), the Issue Price plus all accrued and previously unpaid interest thereon shall be converted into that number of fully paid and nonassessable shares of the newly authorized series of the Company's Preferred Stock sold in the Qualified Equity Financing (the "***New Equity Shares***") as is equal to the Issue Price plus all accrued and previously unpaid interest thereon divided by the lowest price per share paid by investors for the New Equity Shares in the Qualified Equity Financing."

ARTICLE II

AMENDMENT OF WARRANTS

2.1 *Section 2.2.1 of Warrants*. The second full paragraph of Section 2.2.1 of the Warrants is hereby amended and restated in its entirety as follows:

"The term "***Qualified Equity Financing***" shall mean an equity financing after the date hereof which results in aggregate gross proceeds to the Company of at least Five Million Dollars ($5,000,000), excluding the conversion of the Notes, and in which investors purchase shares of a newly authorized series of the Company's Preferred Stock and in which the Notes are converted into Shares."

2.2 *Section 7.3 of Warrants*. Section 7.3 of the Warrants is hereby amended and restated in its entirety as follows:

"7.3 Effect of Certain Events and Transactions.

(a) If this Warrant shall not have been exercised in full before the expiration of the Exercise Period, then this Warrant shall be automatically exercised, without further action on the part of the Holder, in full (and the Holder shall be deemed to have become a holder of the Shares issuable upon such automatic exercise) on and as of the date on which the Exercise Period is scheduled to expire unless, either (i) at any time before the expiration of the Exercise Period, the Holder shall notify the Company in writing that no such automatic exercise is to occur or (ii) the fair market value per share of the Company's capital stock of the same class and series as the Shares as of the time immediately preceding the expiration of the Exercise Period is less than the Exercise Price then in effect. Unless the Holder otherwise notifies the Company in writing or the fair market value per share of the Company's capital stock of the same class and series as the Shares as of the time immediately preceding the expiration of the Exercise Period is less than the Exercise Price then in effect, the Holder shall be deemed to have elected to pay the Exercise Price due in connection with such automatic exercise pursuant to this Section 7(a) pursuant to the provisions of Section 2.6. If the Holder has advised the Company in writing before the Expiration Date that no automatic exercise under this Section 7.3(a) is to occur or if the fair market value per share of the Company's capital stock of the same class and series as the Shares as of the time immediately preceding the expiration of the Exercise Period is less than the Exercise Price then in effect, then this Warrant shall become void, and all rights to exercise the unexercised portion of this Warrant and all rights in respect of such unexercised portion of this Warrant shall cease immediately after expiration of the Exercise Period.

(b) If there shall be a Liquidation (as defined in the Company's certificate of incorporation, as amended and/or restated from time to time) of the Company while this Warrant remains outstanding pursuant to which the price per share to be paid or distributed for or in respect of shares of the Company's capital stock of the same class and series as the Shares is less than the Exercise Price in effect at the time immediately preceding the consummation of such Liquidation and such consideration is in the form of all cash and/or marketable securities, then this Warrant shall automatically terminate as of the time immediately following the consummation of such Liquidation.

(c) Except as is provided in Section 7.3(d), in the event of a Liquidation of the Company while this Warrant remains outstanding pursuant to which the per share price to be paid or distributed for or in respect of shares of the Company's capital stock of the same class and series as the Shares is greater than the Exercise Price in effect at the time immediately preceding the consummation of such Liquidation and such consideration is in the form of all cash and/or marketable securities, the Holder may by written notice to the Company (an "Election Notice") either:

(i) give notice of its intent to exercise this Warrant in advance of such Liquidation (and may condition such exercise on the consummation of such

Liquidation) by returning the Form of Notice of Exercise or Form of Net Issue Election Notice, as applicable, annexed hereto duly executed by or on behalf of such Registered Holder; or

(ii) in lieu of exercising this Warrant in advance of such Liquidation and receiving the consideration which the holder of the Shares issuable on such conversion of this Warrant would receive in connection with such Liquidation Event (the "Event Consideration"), surrender this Warrant for cancellation and receive, in redemption of and in exchange for this Warrant, an amount equal to the difference between (i) the Event Consideration with respect to the Shares for which this Warrant is exercisable immediately prior to the consummation of such Liquidation, minus (ii) the aggregate Exercise Price of the Shares for which this Warrant was exercisable immediately prior to the consummation of such Liquidation (the "Net Warrant Event Consideration").

(d) If, in connection with such Liquidation, the price per share to be paid or distributed for or in respect of shares of the Company's capital stock of the same class and series as the Shares is greater than the Exercise Price in effect at the time of immediately preceding the consummation of such Liquidation, such consideration is in the form of all cash and/or marketable securities and the Holder has not, prior to the time immediately preceding the consummation of such Liquidation, provided a Form of Notice of Exercise or Form of Net Issue Election Notice, then (x) the Holder shall be deemed to have elected to surrender this Warrant for cancellation and to receive, in redemption of and in exchange for this Warrant, an amount equal to the Net Warrant Event Consideration, and (y) this Warrant shall be terminated and of no further force immediately after the consummation of such Liquidation other than as evidence the Holder's right to receive the Net Warrant Event Consideration. In lieu of the foregoing, the Company may provide in the definitive agreements governing such Liquidation that the Holder shall be entitled receive an amount equal to the Net Warrant Event Consideration in exchange for and upon surrender of this Warrant."

2.3 *Section 11 of the Warrants*. Section 11 of the Warrants is hereby amended and restated in its entirety as follows:

"11. Amendments and Waivers. This Warrant may be amended and the observance of any other term of this Warrant may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the holders of a majority in interest of the Shares issuable upon exercise of the Warrants issued pursuant to the Purchase Agreement; provided, that: (a) any such amendment, waiver or consent shall apply with equal force to all of the Warrants issued pursuant to the Purchase Agreement and the holders of such Warrants; (b) except for any amendment, waiver or consent which applies with equal force to all of the Warrants issued pursuant to the Purchase Agreement and the holders of such Warrants with respect to the operation of any of the provisions of such Warrants that require an adjustment to the Exercise Price and the number and kind of shares of stock or other securities or property deliverable upon the exercise of this Warrant upon the occurrence of any specified event, transaction, condition or circumstance, the written

consent of the Holder shall be required for any amendment, waiver or consent that would (i) increase the Exercise Price or decrease the number or type of shares of stock or other securities or property purchasable at the time of such amendment, waiver or consent upon exercise of this Warrant, or (ii) impair the Holder's right to exercise this Warrant or the effect of Section 7.3; and (c) no consideration or other accommodation is paid or provided to any holder of such Warrants in connection with or related to such amendment, waiver or consent that is not also offered to the Holder. Any amendment or waiver effected in accordance with this Section 11 shall be binding upon Holder of this Warrant (and of any Shares into which this Warrant is exercisable), and each future holder of all such securities and the Company."

2.4 *New Section 14 Added to the Warrants*. The following provision is added as a new Section 14 to the Warrants.

"14. Certain Notices. If at any time:

(a) The Company shall declare any cash dividend upon its Shares;

(b) There shall be any acquisition or capital reorganization or reclassification of the capital stock of the Company;

(c) There shall be a voluntary or involuntary dissolution, liquidation or winding-up of the Company; or

(d) There shall be an initial public offering of the Company's securities;

then, in any one or more of said cases, the Company shall give, by first class mail, postage prepaid or by reputable overnight express courier (charges prepaid) or by facsimile (with confirmation of transmittal) or electronic mail, addressed to the Holder of this Warrant at the address of such Holder as shown on the signature page hereof (or such other address as the Holder may designate by advance written notice to the Company), (a) at least ten (10) days prior written notice of the date on which the books of the Company shall close or a record shall be taken for such dividend or for determining rights to vote in respect of any such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up or public offering, and (b) in the case of any such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up or public offering, at least ten (10) days prior written notice of the date when the same shall take place; provided, however, that the Holder shall make a best efforts attempt to respond to such notice as early as possible after the receipt thereof. Any notice given in accordance with the foregoing clause (a) shall also specify, in the case of any such dividend, the date on which the holders of Shares shall be entitled thereto. Any notice given in accordance with the foregoing clause (b) shall also specify the date on which the holders of Shares shall be entitled to exchange their Shares for securities or other property deliverable upon such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up, conversion or public offering, as the case may be."

ARTICLE III

MISCELLANEOUS

3.1 *Captions*. The headings contained in this Amendment are for reference purposes only and shall not affect in any way the meaning or interpretation of this Amendment. Except as otherwise indicated, all references in this Amendment to "Sections" are intended to refer to the Sections of each Note or Warrant, as applicable.

3.2 *Governing Law*. This Amendment and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the State of Delaware, without giving effect to principles of conflicts of law.

3.3 *Counterparts*. This Amendment may be executed in counterparts, each of which shall be deemed to be an original, and all of which together shall be deemed to be one and the same instrument.

3.4 *Electronic and Facsimile Signatures*. Any signature page delivered electronically or by facsimile (including without limitation transmission by .pdf) shall be binding to the same extent as an original signature page, with regard to any agreement subject to the terms hereof or any amendment thereto. Any party who delivers such a signature page agrees to later deliver an original counterpart to the other party if so requested.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties have executed this Amendment to Convertible Promissory Notes and Warrants as of the date first written above.

THE COMPANY:

EXAGEN DIAGNOSTICS, INC.

By: /s/ Fortunato Ron Rocca
Name: Fortunato Ron Rocca
Title: President and Chief Executive Officer

Address: 1261 Liberty Way, Suite C
Vista, CA 92081

IN WITNESS WHEREOF, the parties have executed this Amendment to Convertible Promissory Notes and Warrants as of the date first written above.

REQUISITE HOLDER:

NMSIC FOCUSED LLC

By: NMSIC Co-Investment Fund LP, its sole member
By: Sun Mountain Capital Partners LLC, its General Partner

By: /s/ Brian Birk
Name: Brian Birk
Title: Managing Member

By: /s/ Lee Rand
Name: Lee Rand
Title: Managing Member

Address: Sun Mountain Capital LLC
527 Don Gaspar
Santa Fe, NM 87505
Facsimile No.: (505) 954-5403

IN WITNESS WHEREOF, the parties have executed this Amendment to Convertible Promissory Notes and Warrants as of the date first written above.

REQUISITE HOLDER:

HUNT HOLDINGS, LIMITED PARTNERSHIP
By: HuntVest, LLC, its General Partner
By: Hunt Guaranty Inc., its Sole Member

By: /s/ Matthew Hunt
Name: Matthew D. Hunt
Title: Managing Partner

Address: 4401 N. Mesa St.
El Paso, TX 79902
Facsimile No.: (915) 533-6150

IN WITNESS WHEREOF, the parties have executed this Amendment to Convertible Promissory Notes and Warrants as of the date first written above.

REQUISITE HOLDER:

TULLIS-DICKERSON CAPITAL FOCUS III, L.P.
By: Tullis-Dickerson Partners III, L.L.C., its General Partner

By: /s/ James L.L. Tullis
Name: James L.L. Tullis
Title: Manager

Address: 500 West Putnam Avenue
Suite 400
Greenwich, CT 06830
Facsimile No.: (561) 200-3600

TULLIS-GROWTH FUND, L.P.
By: Tullis-Growth Partners, L.L.C., its General Partner

By: /s/ James L.L. Tullis
Name: James L.L. Tullis
Title: Manager

Address: 500 West Putnam Avenue
Suite 400
Greenwich, CT 06830
Facsimile No.: (561) 200-3600

THIS WARRANT AND THE SECURITIES ISSUABLE UPON THE EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY STATE SECURITIES LAWS. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED IN THE ABSENCE OF A REGISTRATION STATEMENT IN EFFECT WITH RESPECT TO THE SECURITIES UNDER THE SECURITIES ACT OR AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED OR UNLESS SOLD PURSUANT TO AN EXEMPTION TO THE SECURITIES ACT.

THE SALE OF THE SECURITIES WHICH ARE THE SUBJECT OF THIS WARRANT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA OR ANY OTHER STATE AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION FOR SUCH SECURITIES PRIOR TO SUCH QUALIFICATION IS UNLAWFUL, UNLESS THE SALE OF SUCH SECURITIES IS EXEMPT FROM QUALIFICATION BY SECTION 2511, 25102 OR 25105 OF THE CALIFORNIA CORPORATIONS CODE OR SUCH PROVISIONS OF THE CORPORATIONS CODE OF ANY SUCH OTHER STATE. THE RIGHTS OF THE HOLDER OF THIS WARRANT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED, UNLESS THE SALE IS SO EXEMPT.

Warrant No.

EXAGEN DIAGNOSTICS, INC.

COMMON STOCK PURCHASE WARRANT

THIS CERTIFIES that, for value received, _____, together with is permitted successors and assigns (the "Holder") is entitled, upon the terms and subject to the conditions hereinafter set forth, at any time on or after the date of this warrant (this "Warrant") and on or prior to _____, 2026 (the "Expiration Date"), but not thereafter, to subscribe for and purchase from Exagen Diagnostics, Inc., a Delaware corporation (the "Company"), _____ (_____) shares of Common Stock in the Company (the "Shares") at an exercise price of $0.01 per share (the "Exercise Price"), subject to adjustment as provided herein. This Warrant is one of a series of warrants issued pursuant to that certain Series E Preferred Stock Purchase and Exchange Agreement dated January 19, 2016, by and among the Company and the entities and persons listed on the Schedules thereto (the "Purchase Agreement"), and the Holder and the Company shall be bound by all the terms, conditions and provisions of the Purchase Agreement.

1. Exercise of Warrant.

(a) Unless earlier terminated under Section 7, the purchase rights represented by this Warrant to purchase Shares are exercisable, in whole or in part, before the close of business on the Expiration Date, by the surrender of this Warrant and the Notice of Exercise annexed hereto duly executed at the principal executive office of the Company (or such other

office or agency of the Company as it may designate by notice in writing to the Holder at the address of the Holder appearing on the books of the Company), and upon payment of the Exercise Price of the Shares thereby purchased (by cash or by check or bank draft payable to the order of the Company in an amount equal to the Exercise Price of the shares thereby purchased).

(b) Unless earlier terminated under Section 7, in lieu of exercising this Warrant by payment of cash or check pursuant to Section 1(a), the Holder may elect to receive Shares equal to the value of this Warrant (or the portion thereof being exercised), by surrender of this Warrant at the principal executive office of the Company, together with the Notice of Conversion annexed hereto, in which event the Company will issue to the Holder Shares in accordance with the following formula:

$$X = \frac{Y\,(A-B)}{A}$$

Where, X = the number of Shares to be issued to Holder;

Y = the number of Shares for which the Warrant is being exercised;

A = the fair market value of one Share; and

B = the Exercise Price.

For purposes of this Section 1(b), the fair market value of a Share shall be the price per Share that the Company could obtain from a willing buyer for Shares sold by the Company from authorized but unissued Shares, as such price shall be determined in good faith by the Company's Board of Directors. If the Shares are traded on the over-the-counter market or on an exchange, the fair market value of a Share shall be the average of the closing bid and asked prices of Shares quoted in the over-the-counter market in which the Shares are traded or the closing price quoted on any exchange on which the Shares are listed, whichever is applicable, as published in the Western Edition of The Wall Street Journal for the ten (10) trading days prior to the date of determination of fair market value (or such shorter period of time during which such stock was traded over-the-counter or on such exchange).

(c) As soon as practicable after the exercise of this Warrant in whole or in part, and in any event within ten (10) days thereafter, the Company at its expense will cause to be issued in the name of, and delivered to, the Holder, or such other name as specified on the Notice of Exercise delivered to the Company:

(i) a certificate or certificates for the number of Shares to which such Holder shall be entitled; and

(ii) in case such exercise is in part only, a Warrant or Warrants (dated the date hereof) of like tenor, calling in the aggregate on the face or faces thereof for the number of Shares equal (without giving effect to any adjustments therein) to the number of Shares called for on the face of this Warrant minus the number of such Shares purchased by the Holder upon such exercise as provide in Sections 1(a) or (b) above.

2. Shares to be Fully Paid; Reservation of Shares . The Company covenants that all Shares which may be issued upon the exercise of rights represented by this Warrant will, upon issuance, be duly authorized, validly issued, fully paid and nonassessable and free from all preemptive rights of any stockholder and free from all taxes, liens and charges in respect of the issue thereof. Certificates for Shares purchased hereunder shall be delivered to the Holder within a reasonable time after the date on which this Warrant shall have been exercised as aforesaid. The Company further covenants and agrees that during the period within which the rights represented by this Warrant may be exercised, the Company will at all times have authorized and reserved (or will have provided for the ability to accomplish the same through a voting contract amongst sufficient stockholders), for the purpose of issue or transfer upon exercise of the subscription rights evidenced by this Warrant, a sufficient number of shares of authorized but unissued Shares, or other securities and property, when and as required for the exercise of the rights represented by this Warrant.

3. Adjustment of Exercise Price and Number of Shares . The Exercise Price and the number of shares purchasable upon the exercise of this Warrant shall be subject to adjustment from time to time upon the occurrence of certain events described in this Section 3. Whenever the number of Shares purchasable upon the exercise of this Warrant is adjusted as herein provided the Exercise Price payable upon exercise of this Warrant shall be adjusted by multiplying the Exercise Price in effect immediately prior to such adjustment by a fraction, of which the numerator shall be the number of Shares purchasable upon the exercise of this Warrant immediately prior to such adjustment, and of which the denominator shall be the number of Shares so purchasable immediately thereafter.

(a) Split, Subdivision or Combination of Shares. If the Company at any time while this Warrant, or any portion hereof, remains outstanding and unexpired shall split, subdivide or combine the Shares, into a different number of securities of the same class, the number of Shares purchasable upon exercise of this Warrant immediately prior thereto shall be adjusted so that the holder of this Warrant shall be entitled to receive the kind and number of Shares or other securities of the Company which the Holder would have owned or have been entitled to receive after the happening of any of the events described above, had this Warrant been exercised immediately prior to the happening of such event or any record date with respect thereto. An adjustment made pursuant to this Section 3(a) shall become effective immediately after the effective date of such event retroactive to the record date, if any, for such event.

(b) Reclassification. If the Company, at any time while this Warrant, or any portion hereof, remains outstanding and unexpired by reclassification of securities or otherwise, shall change the Shares into the same or a different number of securities or any other class or classes, this Warrant shall thereafter represent the right to receive the kind and number of Shares or other securities of the Company which the Holder would have owned or have been entitled to receive after the happening of the event described above, had this Warrant been exercised immediately prior to the happening of such event or any record date with respect thereto. An adjustment made pursuant to this Section 3(b) shall become effective immediately after the effective date of such event retroactive to the record date, if any, for such event.

(c) Cash Distributions. No adjustment on account of cash dividends or interest on the Shares will be made to the Exercise Price under this Warrant.

(d) De Minimus Adjustments. No adjustment in the number of Shares purchasable hereunder shall be required unless such adjustment would require an increase or decrease of at least one percent (1%) in the number of Shares purchasable upon the exercise of this Warrant; provided, however, that any adjustments which by reason of this Section 3(d) are not required to be made shall be carried forward and taken into account in any subsequent adjustment. All calculations shall be made to the nearest one-thousandth of a cent and to the nearest one-hundredth of a Share, as the case may be.

(e) Notice of Adjustment. Upon any adjustment of the Exercise Price or any increase or decrease in the number of shares purchasable upon the exercise of this Warrant, the Company shall give written notice thereof, by first class mail postage prepaid or by reputable overnight express courier (charges prepaid) or by facsimile (with confirmation of transmittal) or electronic mail, addressed to the registered Holder of this Warrant at the address of such Holder as shown on the signature page hereof (or such other address as the Holder may designate by advance written notice to the Company). The notice shall be signed by the Company's chief financial officer and shall state the Exercise Price resulting from such adjustment and the increase or decrease, if any, in the number of shares purchasable at such price upon the exercise of this Warrant, setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based.

(f) Other Notices. If at any time:

(i) The Company shall declare any cash dividend upon its Shares;

(ii) There shall be any acquisition or capital reorganization or reclassification of the capital stock of the Company;

(iii) There shall be a voluntary or involuntary dissolution, liquidation or winding-up of the Company; or

(iv) There shall be an initial public offering of the Company's securities;

then, in any one or more of said cases, the Company shall give, by first class mail, postage prepaid or by reputable overnight express courier (charges prepaid) or by facsimile (with confirmation of transmittal) or electronic mail, addressed to the Holder of this Warrant at the address of such Holder as shown on the signature page hereof (or such other address as the Holder may designate by advance written notice to the Company), (a) at least ten (10) days prior written notice of the date on which the books of the Company shall close or a record shall be taken for such dividend or for determining rights to vote in respect of any such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up or public offering, and (b) in the case of any such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up or public offering, at least ten (10) days prior written notice of the date when the same shall take place; provided, however, that the Holder shall make a best efforts attempt to respond to such notice as early as possible after the receipt thereof. Any notice given in accordance

with the foregoing clause (a) shall also specify, in the case of any such dividend, the date on which the holders of Shares shall be entitled thereto. Any notice given in accordance with the foregoing clause (b) shall also specify the date on which the holders of Shares shall be entitled to exchange their Shares for securities or other property deliverable upon such acquisition, reorganization, reclassification, dissolution, liquidation, winding-up, conversion or public offering, as the case may be.

4. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. With respect to any fraction of a share called for upon the exercise of this Warrant, an amount equal to such fraction multiplied by the then current price at which each Share may be purchased hereunder shall be paid in cash to the Holder.

5. Charges, Taxes and Expenses. Issuance of certificates for Shares upon the exercise of this Warrant shall be made without charge to the Holder hereof for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder or such other name as specified on the Notice of Exercise delivered to the Company.

6. No Rights as Stockholders. This Warrant does not entitle the Holder to any voting rights or other rights as a stockholder of the Company prior to the exercise thereof.

7. Effect of Certain Events and Transactions.

(a) If this Warrant shall not have been exercised in full before the Expiration Date, then this Warrant shall be automatically exercised, without further action on the part of the Holder, in full (and the Holder shall be deemed to have become a holder of the Shares issuable upon such automatic exercise) on and as of the date on which the Expiration Date is scheduled to occur unless, at any time before the Expiration Date, the Holder shall notify the Company in writing that no such automatic exercise is to occur. Unless the Holder otherwise notifies the Company in writing, the Holder shall be deemed to have elected to pay the Exercise Price due in connection with such automatic exercise pursuant to this Section 7(a) pursuant to the provisions of Section 1(b). If the Holder has advised the Company in writing before the Expiration Date that no automatic exercise under this Section 4(c) is to occur, then this Warrant shall become void, and all rights to exercise the unexercised portion of this Warrant and all rights in respect of such unexercised portion of this Warrant shall cease immediately after the Expiration Date.

(b) If there shall be a Liquidation (as defined in the Company's certificate of incorporation, as amended and/or restated from time to time) of the Company while this Warrant remains outstanding pursuant to which the price per share to be paid or distributed for or in respect of shares of the Company's capital stock of the same class and series as the Shares is less than the Exercise Price in effect at the time immediately preceding the consummation of such Liquidation and such consideration is in the form of all cash and/or marketable securities, then this Warrant shall automatically terminate as of the time immediately following the consummation of such Liquidation.

(c) Except as is provided in Section 7(d), in the event of a Liquidation of the Company while this Warrant remains outstanding pursuant to which the per share price to be

paid or distributed for or in respect of shares of the Company's capital stock of the same class and series as the Shares is greater than the Exercise Price in effect at the time immediately preceding the consummation of such Liquation and such consideration is in the form of all cash and/or marketable securities, the Holder may by written notice to the Company (an "Election Notice") either:

(i) give notice of its intent to exercise this Warrant in advance of such Liquidation (and may condition such exercise on the consummation of such Liquidation) by returning the Notice of Exercise annexed hereto duly executed by or on behalf of such Registered Holder; or

(ii) in lieu of exercising this Warrant in advance of such Liquidation and receiving the consideration which the holder of the Shares issuable on such conversion of this Warrant would receive in connection with such Liquidation Event (the "Event Consideration"), surrender this Warrant for cancellation and receive, in redemption of and in exchange for this Warrant, an amount equal to the difference between (i) the Event Consideration with respect to the Shares for which this Warrant is exercisable immediately prior to the consummation of such Liquidation, minus (ii) the aggregate Exercise Price of the Shares for which this Warrant was exercisable immediately prior to the consummation of such Liquidation (the "Net Warrant Event Consideration").

(d) If, in connection with such Liquidation, the price per share to be paid or distributed for or in respect of shares of the Company's capital stock of the same class and series as the Shares is greater than the Exercise Price in effect at the time of immediately preceding the consummation of such Liquidation, such consideration is in the form of all cash and/or marketable securities and the Holder has not, prior to the time immediately preceding the consummation of such Liquidation, provided an Election Notice, then (x) the Holder shall be deemed to have elected to surrender this Warrant for cancellation and to receive, in redemption of and in exchange for this Warrant, an amount equal to the Net Warrant Event Consideration, and (y) this Warrant shall be terminated and of no further force immediately after the consummation of such Liquidation other than as evidence the Holder's right to receive the Net Warrant Event Consideration. In lieu of the foregoing, the Company may provide in the definitive agreements governing such Liquidation that the Holder shall be entitled receive an amount equal to the Net Warrant Event Consideration in exchange for and upon surrender of this Warrant.

8. Loss, Theft, Destruction or Mutilation of Warrant. Upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it, and upon reimbursement to the Company of all reasonable expenses incidental thereto, and upon surrender and cancellation of this Warrant, if mutilated, the Company will make and deliver a new warrant of like tenor and dated as of such cancellation, in lieu of this Warrant.

9. Miscellaneous.

(a) Issue Date. The provisions of this Warrant shall be construed and shall be given effect in all respects as if this Warrant had been issued and delivered by the Company on the date set forth below.

(b) Governing Law. THIS WARRANT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF DELAWARE WITHOUT REGARD TO CONFLICTS OF LAWS PRINCIPLES.

(c) Restrictions. By acceptance hereof, the Holder acknowledges that the Shares acquired upon the exercise of this Warrant may have restrictions upon their resale imposed by state and federal securities laws, and that certain Fifth Amended and Restated Stockholders' Agreement, as it may be amended from time to time.

(d) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday or a Sunday or shall be a legal holiday, then such action may be taken or such right may be exercised on the next succeeding day not a Saturday, Sunday or legal holiday.

(e) Waivers and Amendments. This Warrant may be amended and the observance of any other term of this Warrant may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the holders of 55% of the Shares issuable upon exercise of the Warrants issued pursuant to the Purchase Agreement; provided, that: (i) any such amendment, waiver or consent shall apply with equal force to all of the Warrants issued pursuant to the Purchase Agreement and the holders of such Warrants; (ii) except for any amendment, waiver or consent which applies with equal force to all of the Warrants issued pursuant to the Purchase Agreement and the holders of such Warrants with respect to the operation of any of the provisions of such Warrants that require an adjustment to the Exercise Price and the number and kind of shares of stock or other securities or property deliverable upon the exercise of this Warrant upon the occurrence of any specified event, transaction, condition or circumstance, the written consent of the Holder shall be required for any amendment, waiver or consent that would (x) increase the Exercise Price or decrease the number or type of shares of stock or other securities or property purchasable at the time of such amendment, waiver or consent upon exercise of this Warrant, or (y) impair the Holder's right to exercise this Warrant or the effect of Section 7; and (iii) no consideration or other accommodation is paid or provided to any holder of such Warrants in connection with or related to such amendment, waiver or consent that is not also offered to the Holder. Any amendment or waiver effected in accordance with this Section 9(e) shall be binding upon Holder of this Warrant (and of any Shares into which this Warrant is exercisable), and each future holder of all such securities and the Company.

(f) Assignment. This Warrant may be assigned or transferred by the Holder only with the prior written approval of the Company.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized.

Date: _____, 2016

EXAGEN DIAGNOSTICS, INC.
a Delaware corporation

By: _____
Name: Fortunato Ron Rocca
Title: Chief Executive Officer

Address: 1261 Liberty Way
Vista, CA 92081

ACKNOWLEDGED AND AGREED:

[NAME OF HOLDER]

By: _____
Name: _____
Title: _____

Address: _____

_____

Facsimile No.: _____

NOTICE OF EXERCISE

TO: Exagen Diagnostics, Inc.
1261 Liberty Way
Vista, CA 92081
ATTN: Secretary

1. The undersigned hereby elects to purchase _____ shares of Common Stock (the "Shares") of Exagen Diagnostics, Inc. pursuant to the terms of the attached Warrant, and makes payment in the form of (check applicable box or boxes):

☐ $_____ in lawful money of the United States; and/or

☐ the cancellation of such portion of the attached Warrant as is exercisable for a total of _____ Warrant Shares (using a fair market value of $_____ per share for purposes of this calculation); and/or

☐ the cancellation of such number of Shares as is necessary, in accordance with the formula set forth in subsection 1(b), to exercise this Warrant with respect to the maximum number of Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 1(b).

2. Please issue a certificate or certificates representing the Shares in the name of the undersigned or in such other name as is specified below:

_____
(Print Name)

Address: _____

_____

3. The undersigned confirms that the Shares are being acquired for the account of the undersigned for investment only and not with a view to, or for resale in connection with, the distribution thereof and that the undersigned has no present intention of distributing or selling the Shares. **[THIS PROVISION TO BE REMOVED IN THE EVENT OF EXERCISE IN CONNECTION WITH A LIQUIDATION]**

_____
(Date)

_____
(Signature)

_____
(Print Name)

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN SECTIONS 5.3 AND 5.4 BELOW, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED (I) UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR (II) WITHOUT AN OPINION OF COUNSEL, IN FORM AND SUBSTANCE REASONABLY SATISFACTORY TO THE COMPANY, THAT SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

WARRANT TO PURCHASE STOCK

Company	EXAGEN DIAGNOSTICS, INC.
Number of Shares	(subject to Section 1.7)
Type/Series of Stock	Series F Preferred (subject to Section 1.7)
Warrant Price	$0.078 per share (subject to Section 1.7)
Issue Date	
Expiration Date	(See also Section 5.1(b))
Credit Facility	This Warrant to Purchase Stock ("Warrant") is issued in connection with that certain Loan and Security Agreement dated as of , among Innovatus Life Sciences Lending Fund I, LP, as Lender and Collateral Agent, the Lenders from time to time party thereto, and the Company (as modified, amended and/or restated from time to time, the "Loan Agreement").

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, INNOVATUS LIFE SCIENCES LENDING FUND I, LP ("Innovatus"), a Delaware limited partnership with an office located at 777 Third Avenue, 25th Floor, New York, NY 10017 (together with any successor or permitted assignee or transferee of this Warrant or of any shares issued upon exercise hereof, "Holder") is entitled to purchase the number of fully paid and non-assessable shares (the "Shares") of the above-stated Type/Series of Stock (the "Class") of the above-named company (the "Company") at the above-stated Warrant Price, all as set forth above and as adjusted pursuant to Section 2 of this Warrant, subject to the provisions and upon the terms and conditions set forth in this Warrant.

SECTION 1. EXERCISE.

1.1 Method of Exercise. Holder may at any time and from time to time exercise this Warrant, in whole or in part, by delivering to the Company the original of this Warrant together with a duly executed Notice of Exercise in substantially the form attached hereto as Appendix 1 and, unless Holder is exercising this Warrant pursuant to a cashless exercise set forth in Section 1.2, a check, wire transfer of same-day funds (to an account designated by the Company), or other form of payment acceptable to the Company for the aggregate Warrant Price for the Shares being purchased.

1.2 Cashless Exercise. On any exercise of this Warrant, in lieu of payment of the aggregate Warrant Price in the manner as specified in Section 1.1 above, but otherwise in accordance with the requirements of Section 1.1, Holder may elect to receive Shares equal to the value of this Warrant, or portion hereof as to which this Warrant is being exercised. Thereupon, the Company shall issue to the Holder such number of fully paid and non-assessable Shares as are computed using the following formula:

X =Y(A-B)/A

where:

X = the number of Shares to be issued to the Holder;

Y = the number of Shares with respect to which this Warrant is being exercised (inclusive of the Shares surrendered to the Company in payment of the aggregate Warrant Price);

A = the Fair Market Value (as determined pursuant to Section 1.3 below) of one Share; and

B = the Warrant Price.

1.3 Fair Market Value. If the Company's common stock is then traded or quoted on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market (a "Trading Market") and the Class is common stock, the fair market value of a Share shall be the closing price or last sale price of a share of common stock reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company. If the Company's common stock is then traded in a Trading Market and the Class is a series of the Company's convertible preferred stock, the fair market value of a Share shall be the closing price or last sale price of a share of the Company's common stock reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company multiplied by the number of shares of the Company's common stock into which a Share is then convertible. If the Company's common stock is not traded in a Trading Market, the Board of Directors of the Company shall determine the fair market value of a Share in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Reasonably promptly after Holder exercises this Warrant in the manner set forth in Section 1.1 or 1.2 above, the Company shall deliver to Holder a certificate representing the Shares issued to Holder upon such exercise and, if this Warrant has not been fully exercised and has not expired, a new warrant of like tenor representing the Shares not so acquired.

1.5 Replacement of Warrant. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form, substance and amount to the Company or, in the case of mutilation, on surrender of this Warrant to the Company for cancellation, the Company shall, within a reasonable time, execute and deliver to Holder, in lieu of this Warrant, a new warrant of like tenor and amount.

1.6 Treatment of Warrant Upon Acquisition of Company.

(a) Acquisition. For the purpose of this Warrant, "Acquisition" means any transaction or series of related transactions involving: (i) the sale, lease, exclusive license or other disposition of all or substantially all of the assets of the Company; (ii) any merger or consolidation of the Company into or with another person or entity (other than a merger or consolidation effected exclusively to change the Company's domicile), or any other corporate reorganization, in which the stockholders of the Company in their capacity as such immediately prior to such merger, consolidation

or reorganization, own less than a majority of the Company's (or the surviving or successor entity's) outstanding voting power immediately after such merger, consolidation or reorganization (but excluding the sale of less than forty-nine percent (49%) of the shares of capital stock of the Company in a bona fide equity financing or series of financings); or (iii) any sale or other transfer by the stockholders of the Company of shares representing a majority of the Company's then-total outstanding combined voting power.

(b) Treatment of Warrant at Acquisition. In the event of an Acquisition in which the consideration to be received by the Company's stockholders consists solely of cash, solely of Marketable Securities or a combination of cash and Marketable Securities (a "Cash/Public Acquisition"), either (i) Holder shall exercise this Warrant pursuant to Section 1.1 and/or 1.2 and such exercise will be deemed effective immediately prior to and contingent upon the consummation of such Acquisition or (ii) if Holder elects not to exercise the Warrant, this Warrant will expire immediately prior to the consummation of such Acquisition.

(c) The Company shall provide Holder with written notice of its request relating to the Cash/Public Acquisition (together with such reasonable information as Holder may reasonably require regarding the treatment of this Warrant in connection with such contemplated Cash/Public Acquisition giving rise to such notice), which is to be delivered to Holder not less than seven (7) Business Days prior to the closing of the proposed Cash/Public Acquisition. Notwithstanding the foregoing, if, immediately prior to the Cash/Public Acquisition, the fair market value of one Share (or other security issuable upon the exercise hereof) as determined in accordance with Section 1.3 above would be greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares (or such other securities) for which it shall not previously have been exercised, and the Company shall promptly notify the Holder of the number of Shares (or such other securities) issued upon such exercise to the Holder and Holder shall be deemed to have restated each of the representations and warranties in Section 4 of this Warrant as of the date thereof.

(d) Upon the closing of any Acquisition other than a Cash/Public Acquisition defined above, the acquiring, surviving or successor entity shall assume the obligations of this Warrant, and this Warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this Warrant.

(e) As used in this Warrant, "Marketable Securities" means securities meeting all of the following requirements: (i) the issuer thereof is then subject to the reporting requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and is then current in its filing of all required reports and other information under the Act and the Exchange Act; (ii) the class and series of shares or other security of the issuer that would be received by Holder in connection with the Acquisition were Holder to exercise this Warrant on or prior to the closing thereof is then traded in Trading Market; and (iii) Holder would not be restricted by applicable federal securities laws from publicly re-selling, beginning six (6) months following the closing of such Acquisition, all of the issuer's shares and/or other securities that would be received by Holder in such Acquisition were Holder to exercise this Warrant in full on or prior to the closing of such Acquisition.

1.7 Adjustment in Underlying Preferred Stock Price and Warrant Price. If Company sells and issues to any investors preferred stock in the next bona fide equity financing after the Issue

Date, and the price per share in such financing is less than the Warrant Price, this Warrant shall, concurrent with the issuance of such shares of preferred stock, automatically be adjusted to instead be exercisable for shares of the same series and class and bearing the same rights, preferences, and privileges of such shares of stock, with the Warrant Price hereunder adjusted to equal the per share purchase price of such stock, and the number of such shares subject to this Warrant adjusted to equal (i) Dollars ($), divided by (ii) such modified per share Warrant Price. Any adjustments pursuant to this Section 1.7 shall be in addition to any adjustments pursuant to Section 2 below.

SECTION 2. ADJUSTMENTS TO THE SHARES AND WARRANT PRICE.

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend or distribution on the outstanding shares of the Class payable in common stock or other securities or property (other than cash), then upon exercise of this Warrant, for each Share acquired, Holder shall receive, without additional cost to Holder, the total number and kind of securities and property which Holder would have received had Holder owned the Shares of record as of the date the dividend or distribution occurred. If the Company subdivides the outstanding shares of the Class by reclassification or otherwise into a greater number of shares, the number of Shares purchasable hereunder shall be proportionately increased and the Warrant Price shall be proportionately decreased. If the outstanding shares of the Class are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased and the number of Shares shall be proportionately decreased.

2.2 Reclassification, Exchange, Combinations or Substitution. Upon any event whereby all of the outstanding shares of the Class are reclassified, exchanged, combined, substituted, or replaced for, into, with or by Company securities of a different class and/or series, then from and after the consummation of such event, this Warrant will be exercisable for the number, class and series of Company securities that Holder would have received had the Shares been outstanding on and as of the consummation of such event, and subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, combinations substitutions, replacements or other similar events.

2.3 Conversion of Preferred Stock. If the Class is a class and series of the Company's convertible preferred stock, in the event that all outstanding shares of the Class are converted, automatically or by action of the holders thereof, into common stock pursuant to the provisions of the Company's Certificate of Incorporation, including, without limitation, in connection with the Company's initial, underwritten public offering and sale of its common stock pursuant to an effective registration statement under the Act (the "IPO"), then from and after the date on which all outstanding shares of the Class have been so converted, this Warrant shall be exercisable for such number of shares of common stock into which the Shares would have been converted had the Shares been outstanding on the date of such conversion, and the Warrant Price shall equal the Warrant Price in effect as of immediately prior to such conversion divided by the number of shares of common stock into which one Share would have been converted, all subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant.

2.4 Adjustments for Diluting Issuances. Without duplication of any adjustment otherwise provided for in this Section 2, the number of shares of common stock issuable upon conversion of the Shares shall be subject to anti-dilution adjustment from time to time in the manner set forth in the

Company's Certificate of Incorporation as if the Shares were issued and outstanding on and as of the date of any such required adjustment.

2.5 No Fractional Share. No fractional Share shall be issuable upon exercise of this Warrant and the number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional Share interest arises upon any exercise of the Warrant, the Company shall eliminate such fractional Share interest by paying Holder in cash the amount computed by multiplying the fractional interest by (a) the fair market value (as determined in accordance with Section 1.3 above) of a full Share, less (b) the then-effective Warrant Price.

2.6 Notice/Certificate as to Adjustments. Upon each adjustment of the Warrant Price, Class and/or number of Shares, the Company, at the Company's expense, shall notify Holder in writing within a reasonable time setting forth the adjustments to the Warrant Price, Class and/or number of Shares and facts upon which such adjustment is based. The Company shall, upon written request from Holder, furnish Holder with a certificate of its Chief Financial Officer, including computations of such adjustment and the Warrant Price, Class and number of Shares in effect upon the date of such adjustment.

SECTION 3. REPRESENTATIONS AND COVENANTS OF THE COMPANY.

3.1 Representations and Warranties. The Company represents and warrants to, and agrees with, the Holder as follows:

(a) The initial Warrant Price referenced on the first page of this Warrant is not greater than the price per share at which shares of the Class were last sold and issued prior to the Issue Date hereof in an arms-length transaction in which at least $500,000 of such shares were sold.

(b) All Shares which may be issued upon the exercise of this Warrant, and all securities, if any, issuable upon conversion of the Shares, shall, upon issuance, be duly authorized, validly issued, fully paid and non-assessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws. The Company covenants that it shall at all times cause to be reserved and kept available out of its authorized and unissued capital stock such number of shares of the Class, common stock and other securities as will be sufficient to permit the exercise in full of this Warrant and the conversion of the Shares into common stock or such other securities.

(c) The Company's capitalization table attached hereto as Schedule 1 is true and complete, in all material respects, as of the Issue Date.

3.2 Notice of Certain Events. If the Company proposes at any time to:

(a) declare any dividend or distribution upon the outstanding shares of the Class or common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend;

(b) effect any reclassification, exchange, combination, substitution, reorganization or recapitalization of the outstanding shares of the Class;

(c) effect an Acquisition or to liquidate, dissolve or wind up; or

(d) effect an IPO;

then, in connection with each such event, the Company shall give Holder:

(1) at least seven (7) Business Days prior written notice of the date on which a record will be taken for such dividend or distribution (and specifying the date on which the holders of outstanding shares of the Class will be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (a) above;

(2) in the case of the matters referred to in (b) and (c) above at least seven (7) Business Days prior written notice of the date when the same will take place (and specifying the date on which the holders of outstanding shares of the Class will be entitled to exchange their shares for the securities or other property deliverable upon the occurrence of such event); and

(3) with respect to the IPO, at least seven (7) Business Days prior written notice of the date on which the Company proposes to file its registration statement in connection therewith.

Reference is made to Section 1.6(c) whereby this Warrant will be deemed to be exercised pursuant to Section 1.2 hereof if the Company does not give written notice to Holder of a Cash/Public Acquisition as required by the terms hereof. Company will also provide information requested by Holder that is reasonably necessary to enable Holder to comply with Holder's accounting or reporting requirements.

3.3 Registration Rights. The Company agrees that the Holder shall have the "Piggyback" and S-3 registration rights pursuant to and as set forth in the Company's Sixth Amended and Restated Investors' Rights Agreement, dated as of May 4, 2017, as the same may be amended from time to time in accordance with its terms (the "Rights Agreement"), with the Shares being deemed to be "Registrable Securities" and the Holder being deemed a "Holder" thereunder. The provisions set forth in the Rights Agreement or similar agreement relating to such registration rights in effect as of the Issue Date may not be amended, modified or waived without the prior written consent of the Holder unless such amendment, modification or waiver affects the rights associated with the Shares issued and issuable upon exercise hereof (and the shares of the Company's common stock issued and issuable upon conversion of the Shares) in the same manner as such amendment, modification or waiver affects the rights associated with the outstanding shares of the Company's convertible preferred stock which this Warrant is exercisable for and whose holders are parties thereto.

SECTION 4. REPRESENTATIONS, WARRANTIES OF THE HOLDER.

The Holder represents and warrants to the Company as follows:

4.1 Purchase for Own Account. This Warrant and the securities to be acquired upon exercise of this Warrant by Holder are being acquired for investment for Holder's account, not as a nominee or agent, and not with a view to the public resale or distribution within the meaning of the Act. Holder also represents that it has not been formed for the specific purpose of acquiring this Warrant or the Shares.

4.2 Disclosure of Information. Holder is aware of the Company's business affairs and financial condition and has received or has had full access to all the information it considers necessary or appropriate to make an informed investment decision with respect to the acquisition of this Warrant and its underlying securities. Holder further has had an opportunity to ask questions and receive

answers from the Company regarding the terms and conditions of the offering of this Warrant and its underlying securities and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to Holder or to which Holder has access.

4.3 Investment Experience. Holder understands that the purchase of this Warrant and its underlying securities involves substantial risk. Holder has experience as an investor in securities of companies in the development stage and acknowledges that Holder can bear the economic risk of such Holder's investment in this Warrant and its underlying securities and has such knowledge and experience in financial or business matters that Holder is capable of evaluating the merits and risks of its investment in this Warrant and its underlying securities and/or has a preexisting personal or business relationship with the Company and certain of its officers, directors or controlling persons of a nature and duration that enables Holder to be aware of the character, business acumen and financial circumstances of such persons.

4.4 Accredited Investor Status. Holder is an "accredited investor" within the meaning of Regulation D promulgated under the Act.

4.5 The Act. Holder understands that this Warrant and the Shares issuable upon exercise hereof have not been registered under the Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the Holder's investment intent as expressed herein. Holder understands that this Warrant and the Shares issued upon any exercise hereof must be held indefinitely unless subsequently registered under the Act and qualified under applicable state securities laws, or unless exemption from such registration and qualification are otherwise available. Holder is aware of the provisions of Rule 144 promulgated under the Act.

4.6 No Shareholder Rights. Holder, as a Holder of this Warrant, will not have any shareholder or voting rights until the exercise of this Warrant.

4.7 Market Stand-Off. Holder agrees that the Shares or other securities issuable upon the exercise hereof and all securities of the Company issuable with respect thereto shall be subject to the "market stand-off" agreement set forth in Section 2.10 of the Rights Agreement. The provisions set forth in the Rights Agreement to such market stand-off provisions in effect as of the Issue Date may not be amended, modified or waived without the prior written consent of the Holder unless such amendment, modification or waiver affects the rights associated with the Shares issued and issuable upon exercise hereof (and the shares of the Company's common stock issued and issuable upon conversion of the Shares) in the same manner as such amendment, modification or waiver affects the rights associated with the outstanding shares of the Company's convertible preferred stock which this Warrant is exercisable for and whose holders are parties thereto.

SECTION 5. MISCELLANEOUS.

5.1 Term and Automatic Conversion Upon Expiration.

(a) Term. Subject to the provisions of Section 1.6 above, this Warrant is exercisable in whole or in part at any time and from time to time on or before 6:00 P.M., Eastern time, on the Expiration Date and shall be void thereafter.

(b) Automatic Cashless Exercise upon Expiration. In the event that, upon the Expiration Date, the fair market value of one Share (or other security issuable upon the exercise hereof) as determined in accordance with Section 1.3 above is greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares (or such other securities) for which it shall not previously have been exercised, and the Company shall, within a reasonable time, deliver a certificate representing the Shares (or such other securities) issued upon such exercise to Holder.

5.2 Legends. The Shares (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) shall be imprinted with a legend in substantially the following form:

> THE SHARES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN THAT CERTAIN WARRANT TO PURCHASE STOCK ISSUED BY THE ISSUER TO INNOVATUS LIFE SCIENCES LENDING FUND I, LP DATED , , MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED (I) UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR (II) WITHOUT AN OPINION OF COUNSEL, IN FORM AND SUBSTANCE REASONABLY SATISFACTORY TO THE ISSUER, THAT SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

5.3 Compliance with Securities Laws on Transfer. This Warrant and the Shares issuable upon exercise of this Warrant (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) may not be transferred or assigned in whole or in part except in compliance with applicable federal and state securities laws by the transferor and the transferee (including, without limitation, the delivery of investment representation letters and legal opinions reasonably satisfactory to the Company, as reasonably requested by the Company). The Company shall not require Holder to provide an opinion of counsel if the transfer is to an affiliate of Holder; provided that any such transferee is an "accredited investor" as defined in Regulation D promulgated under the Act. Additionally, the Company shall also not require an opinion of counsel if there is no material question as to the availability of Rule 144 promulgated under the Act.

5.4 Transfer Procedure. Subject to the provisions of Section 5.3 and upon providing the Company with written notice, Holder may transfer all or part of this Warrant (this Warrant, together with any warrants issued upon any permitted transfer hereunder are referred to herein collectively as the "Warrants") or the Shares issuable upon exercise of this Warrant (or the securities issuable directly or indirectly, upon conversion of the Shares, if any) to any transferee, provided, however, in connection with any such transfer, Holder will give the Company notice of the portion of the Warrant and/or Shares (and/or securities issued upon conversion of the Shares, if any) being transferred with the name, address and taxpayer identification number of the transferee and Holder will surrender this Warrant to the Company for reissuance to the transferee(s) (and Holder if applicable); and provided further, that any subsequent transferee shall agree in writing with the Company that it makes each of the representations, warranties and covenants set forth in Section 4 hereof and to be bound by all of the terms and conditions of this Warrant. Notwithstanding any contrary provision herein, at all times prior to the IPO, Holder may not, without the Company's prior written consent, transfer this Warrant or any portion hereof, or any

Shares issued upon any exercise or conversion hereof, or any shares or other securities issued upon any conversion of any Shares issued upon any exercise or conversion hereof, to any person or entity who directly competes with the Company, except in connection with (i) an Acquisition of the Company by such a direct competitor or (ii) a sale or other transfer in connection with any sale or transfer of the Loan Agreement subject to, and in accordance with, the terms of the Loan Agreement.

5.5 Notices. All notices and other communications hereunder from the Company to the Holder, or vice versa, shall be deemed delivered and effective (i) when given personally, (ii) on the third (3rd) Business Day after being mailed by first-class registered or certified mail, postage prepaid, (iii) upon actual receipt if given by facsimile or electronic mail and such receipt is confirmed in writing by the recipient, or (iv) on the first Business Day following delivery to a reliable overnight courier service, courier fee prepaid, in any case at such address as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time in accordance with the provisions of this Section 5.5. All notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

INNOVATUS LIFE SCIENCES LENDING FUND I, LP
777 Third Avenue, 25th Floor
New York, NY 10017
Attention: Claes Ekstrom
Email:

Notice to the Company shall be addressed as follows until Holder receives notice of a change in address:

EXAGEN DIAGNOSTICS, INC.
1261 Liberty Way, Suite C
Vista, CA 92081
Attn: Chief Financial Officer
Email:

With a copy (which shall not constitute notice) to:

Latham & Watkins
505 Montgomery Street, Suite 2000
San Francisco, CA 94111-6538
Attn: Haim Zaltzman
Email:

5.6 Waiver. This Warrant and any term hereof may be changed, waived, discharged or terminated (either generally or in a particular instance and either retroactively or prospectively) only by an instrument in writing signed by the Company and the holders of Warrants exercisable for a majority of the total number of Shares then issuable pursuant to all Warrants. Any change or waiver effected in accordance with this Section 5.6 shall be binding upon each holder of Warrants.

5.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this Warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

5.8 Counterparts; Facsimile/Electronic Signatures. This Warrant may be executed in counterparts, all of which together shall constitute one and the same agreement. Any signature page delivered electronically or by facsimile shall be binding to the same extent as an original signature page with regards to any agreement subject to the terms hereof or any amendment thereto.

5.9 Governing Law. This Warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its principles regarding conflicts of law.

5.10 Headings. The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning of any provision of this Warrant.

5.11 Business Days. "Business Day" is any day that is not a Saturday, Sunday or a day on which banks in New York, New York are closed.

[Signature page follows]

IN WITNESS WHEREOF, the parties have caused this Warrant to Purchase Stock to be executed by their duly authorized representatives effective as of the Issue Date written above.

“COMPANY”

EXAGEN DIAGNOSTICS, INC.

_____

Name: Ron Rocca
Title: CEO

“HOLDER”

INNOVATUS LIFE SCIENCES LENDING FUND I, LP

_____

Name: Andrew Dym
Title: Authorized Signatory

Exhibit 10.1

EXAGEN CORPORATION
STOCK OPTION PLAN
(as amended)

1. Purposes of the Plan. The purpose of this Stock Option Plan (as more fully defined as "Plan" below) is to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Corporation (as defined below). The Plan provides for options, which qualify as incentive stock options pursuant to section 422 of the Internal Revenue Code of 1986, as amended, as well as options, which do not so qualify.

2. Effective Date and Duration of Plan. The Plan will become effective immediately upon its adoption by the Board of Directors of the Corporation. The Plan is subject to approval by the shareholders of the Corporation within 12 months before or after the date the Board of Directors adopts the Plan. The Plan will terminate on December 31, 2012, or at an earlier time as the Board of Directors may fix, and no Option will be granted under the Plan after that date. An Option outstanding at the date of termination will remain in effect until it is exercised, expires, or is otherwise canceled, settled or terminated as provided herein or in a Stock Option Agreement.

3. Definitions. The following terms are used throughout the Plan, and whenever used in the capitalized form, except as otherwise expressly provided, the term will be deemed to have the following meaning:

a. "Affiliate" means any individual, corporation, partnership, association, joint-stock company, trust, unincorporated association or other entity (other than the Corporation) that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with the Corporation.

b. "Board of Directors" means the Board of Directors of the Corporation, or any committee of the Board of Directors established and authorized by the Board of Directors to carry out the obligations of the Board of Directors under the Plan.

c. "Common Stock" means the shares of the common stock of the Corporation that is the subject of this Plan, whether now issued or to be issued in the future, and any other stock or security resulting from adjustments made in Paragraph 17.

d. "Corporation" means Exagen Corporation, and includes any successor or assignee corporation(s) into which the Corporation may be merged, changed or consolidated, any corporation for whose securities the securities of the Corporation will be exchanged, and any assignee of or successor to substantially all of the assets of the Corporation.

e. "Fair Market Value" means the most recent value for this purpose based upon the good faith determination of the Board of Directors, or at the discretion of that board by an independent appraiser or appraisers selected by the board. If the stock is publicly traded, the closing price of stock of that class as of the day in question (or, if such day is not a trading day in the principal securities market or markets for such stock, on the nearest preceding trading day),

as reported with respect to the market (or the composite of markets, if more than one) in which shares of such stock are then traded. If no such closing prices are reported, then the Fair Market Value will be determined on the basis of the mean between the high bid and low asking prices that day on the principal market or quotation system on which shares of such stock are then quoted, or, if not so quoted, as furnished by a professional securities dealer making a market in such stock selected by or under authority of the Board of Directors of the Corporation.

f. "Greater Than 10% Shareholder" means a Participant who at the time of the grant of the Option owns more than ten percent of the total combined voting power of all classes of stock of the Corporation or its Affiliates. For purposes of this definition, a Participant is considered to own the stock owned by the Participant's spouse, lineal descendants, parents, siblings, and grandparents, as well as a proportional interest of stock owned by a corporation, partnership, trust, or estate of which the Participant is a shareholder, partner, or beneficiary.

g. "Incentive Stock Option" means an Option that is intended to qualify as an "incentive stock option" under Section 422 of the Code or any successor provision thereto.

h. "Management Objectives" means the achievement of performance objectives established pursuant to this Plan, which may be described in terms of Corporation-wide objectives or objectives that are related to the performance of the individual Participant, or the division, department or function within the Corporation in which the Participant is employed or with respect to which the Participant provides consulting services. The Board of Directors may adjust Management Objectives and the related minimum acceptable level of achievement if, in the sole judgment of the Board of Directors, events or transactions have occurred after the Option Grant Date that are unrelated to the performance of the Participant and result in distortion of the Management Objectives or the related minimum acceptable level of achievement.

i. "Nonqualified Option" means an Option that is not intended to qualify as an Incentive Stock Option.

j. "Option" means an Incentive Stock Option or Nonqualified Option to purchase Common Stock in the Corporation granted under the Plan. To the extent that the aggregate Fair Market Value of stock to which Incentive Stock Options are exercisable for the first time by any Participant during any calendar year (under all plans of the Corporation and its Affiliates) exceeds $100,000, such options will be treated as Nonqualified Options.

k. "Option Grant Date" means the date on which the Board of Directors authorizes the grant to a Participant of an Option to purchase shares of the Common Stock of the Corporation under the Plan.

l. "Option Price" means the price at which the Corporation's Common Stock may be purchased under an Option as provided in the Plan.

m. "Participant" means a person who is selected by the Corporation to receive benefits under this Plan.

n. "Plan" means the Exagen Corporation Stock Option Plan, as set forth in this document and as amended from time to time.

o. "Representative" means, if the Participant is living, but incapacitated, the person or entity acting as the conservator, guardian or temporary guardian of the Participant or as his attorney-in-fact or agent under a valid durable power of attorney. If the Participant has died, then "Representative" means: (a) the person or entity acting as the personal representative of a Participant's estate pursuant to the last will and testament of a Participant or appointed by a judge in an intestate probate action, or, if applicable, (b) the person or entity which is the beneficiary of the Participant.

p. "Stock Option Agreement" means an agreement entered into between a Participant and the Corporation as described in paragraphs 8 and 9.

q. "Stock Restriction Agreement" means an agreement in the form prescribed by the Corporation whereby Stock is subject to certain restrictions and the Corporation is given certain rights to require the sale of stock upon the occurrence of certain events or, if a restriction is violated.

r. "Termination" means, for purposes of this Plan with respect to a Participant, that the Participant no longer is providing services as any of an employee, officer, Director or consultant to the Corporation. For determining whether and when a Participant has incurred a Termination of Employment for cause, "cause" will mean any act or omission defined in any employment agreement or arrangement in existence on the date of Termination of Employment between the Participant and the Corporation or Affiliate which permits the Corporation or Affiliate to terminate the employment agreement or arrangement between the Participant and the Corporation or Affiliate, for cause. In the event there is no employment agreement or arrangement in existence between the Participant and the Corporation or Affiliate at Termination of Employment, or if the term "cause" is not defined in the employment agreement or arrangement, then "cause" will mean (a) any act or omission of a criminal nature, or any act of malfeasance or wrongdoing affecting the Corporation or an Affiliate the result of which is detrimental to the interests of the Corporation or an Affiliate; (b) the material breach of a fiduciary duty owing to the Corporation or Affiliate, including without limitation, fraud and embezzlement; (c) conduct or the omission of conduct on the part of the Participant which constitutes a material breach of any statutory or common-law duty of loyalty to the Corporation or its Affiliate; (d) the breach of any covenant not to compete with the Corporation or its Affiliate; or (e) engaging in any act of disloyalty or any conduct clearly tending to bring discredit upon the Corporation or its Affiliate, or any conduct which causes or reasonably could cause substantial harm to the Corporation or its Affiliate, as determined by the Board of Directors in their sole discretion.

s. "Transfer" means any sale, gift, assignment, distribution, conveyance, pledge, hypothecation, encumbrance, or other transfer of title, whether by operation of law or otherwise.

4. Stock Subject to the Plan. Subject to adjustment as provided in paragraph 17, an aggregate of 10,867,150 shares of the Corporation's common stock will be available for issuance pursuant to Options which may be granted under the Plan. The shares may be either authorized and unissued shares of Common Stock or issued shares of Common Stock that have been reacquired by the Corporation and held as treasury shares. Options which remain unissued at the

termination of this Plan will cease to be reserved for the purpose of the Plan, but until termination of the Plan, the Corporation will at all times reserve a sufficient number of shares of Stock to meet the requirements of the Plan.

5. Terms of Options. Options will be granted on such terms as the Board of Directors will determine, but no Incentive Stock Option will be exercisable after ten years from the Option Grant Date. Notwithstanding the above, if an Incentive Stock Option is granted to a Participant who is a Greater Than 10% Shareholder at the time the Incentive Stock Option is granted, the term with respect to such Incentive Stock Option will not be in excess of five years from the Option Grant Date. The term of any Incentive Stock Option may be subject to termination prior to the expiration of the ten-year period as provided in the Plan.

6. Release of Shares. If any Option granted is subsequently cancelled, forfeited, expires or is terminated for any reason without having been exercised, any shares of Common Stock subject to such Option will again be available and may thereafter be granted or otherwise applied under this Plan.

7. Eligible Employees; Successive Grants. Incentive Stock Options may be granted only to employees (including officers and directors who are also employees) of the Corporation. Non Qualified Stock Options may be granted to employees, officers, directors and consultants of the Company, provided such consultants render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction. The Corporation, by action of the Board of Directors and subject to the provisions of the Plan, may grant Options to individuals selected by the Board of Directors of such number of shares as may be determined by the Board of Directors. In making this selection the Board of Directors may give consideration to the functions and responsibilities of the respective individual, the present and potential contributions of such individual to the Corporation, the value of the individual's service to the Corporation and such other factors deemed relevant by the Board of Directors. Successive grants may be made to the same Participant regardless of whether any Options previously granted to the Participant remain unexercised.

8. Granting of Option. The Corporation in its discretion may require as a condition of the granting of an Option that a Participant make any representation or warranty to the Corporation as the Board of Directors may deem necessary to be required under any applicable law or regulation. This may include, but not be limited to a representation or warranty that the shares are being acquired only for investment and without any present intention to sell or distribute such shares. An Option will be deemed to have been granted only when (i) the Board of Directors has designated the Participant to receive an Option and determined the number of shares to be granted and the exercise price of the Option, and (ii) a Stock Option Agreement has been executed by the Corporation and delivered or mailed to the selected individual. Nothing contained in the Plan or any resolution adopted or to be adopted by the Board of Directors, and no action taken by the Board of Directors will constitute the granting of any Option without the execution by the Corporation of a Stock Option Agreement. In addition, any grants of Options will be subject to the following conditions:

a. Each grant shall specify the conditions, if any, including as and to the extent determined by the Board of Directors, the period or periods of continuous employment, or

continuous engagement of the consulting services, of the optionee by the Corporation, or the achievement of Management Objectives, that are necessary before the Option Rights or installments thereof shall become exercisable, and any grant may provide for the acceleration of the exercise dates of an Option, including, without limitation, in the event of a change in control of the Corporation or other similar transaction or event.

b. Option Rights granted may be Nonqualified Options or Incentive Stock Options or combinations thereof, as set forth in the Stock Option Agreement.

c. The aggregate Fair Market Value per share, determined as of the Option Grant Date, of the Common Stock for which any Participant may be awarded Incentive Stock Options which are first exercisable by the Participant during any calendar year under this Plan (or any other stock option plan required to be taken into account under Section 422(d) of the Code) shall not exceed $100,000.

9. Acceptance of Option by Participant. Any person selected to receive an Option must elect to accept the Option under this Plan within ten business days after the date on which the Stock Option Agreement executed by the Corporation has been delivered or mailed to them. The person selected may elect to accept such Option by executing and delivering a copy of the Stock Option Agreement to the Corporation, and will at that time become a "Participant." No Option granted may be exercised prior to such acceptance. If the Option is not accepted, it will expire automatically at the end of the ten-day period, unless extended in writing by the President of the Corporation.

10. Option Price. The price per share of Common Stock purchasable under Options granted pursuant to the Plan may be less than, equal to or greater than the Fair Market Value on the Option Grant Date, provided, however, that the Option Price with respect to each Incentive Stock Option shall not be less than 100% (or 110%, in the case of an individual described in Section 422(b)(6) of the Code (relating to certain 10% owners)) of the Fair Market Value on the Option Grant Date. The full Option Price for the shares purchased will be paid when the Option is exercised.

11. Exercise of Option in Installments. The Board of Directors may provide that an Option will vest over time and become exercisable in one or more installments. If the grant provides for the vesting of an Option on an installment basis, a Participant will have the right, after an Option has been granted and accepted by the Participant as provided in the Plan, to purchase from the Corporation only those number of shares of Common Stock in which the Participant has vested in accordance with the dates and times provided for by the Board of Directors in the installment schedule included in the Stock Option Agreement. A Participant has no right whatsoever to exercise any Option granted until such installment accrues as provided in the Stock Option Agreement.

12. Method of Exercising Option. Subject to the terms and conditions of the Plan, the Participant or Representative may exercise the Option by delivery of written notice of intent to exercise to the Corporation, at the corporate offices at 2704 Yale Blvd. SE, Albuquerque, NM, 87106.

a. Each notice must state the election to exercise the Option and the number of shares which are being purchased, indicate in what name the certificate will be issued (including joint tenancy with right of survivorship between the Participant and another person, if so opted and if permitted under the Stock Option Agreement and Stock Restriction Agreement), and will be signed by the Participant or Representative exercising the Option and, if Participant is married, by his or her spouse. If a Representative is exercising the Option, the Representative will attach proof, satisfactory to the Corporation, of such person's right to exercise the Option as a Representative of the Participant. Each notice will be accompanied by a check payable to the order of the Corporation for the full purchase price for the shares being purchased. If the Corporation is required to withhold on account of any present or future tax imposed as a result of such exercise, the notice of exercise will be accompanied by a check payable to the order of the Corporation for payment of the amount of any withholding tax.

b. If the Board of Directors requires the execution of a Stock Restriction Agreement, or other agreement, as a condition of exercise of an Option, the Stock Restriction Agreement, or other agreement, will be executed by the Participant or Representative and, if Participant is married, by his or her spouse before any certificate for Common Stock is issued.

c. The Corporation will deliver the certificate representing the shares of Common Stock purchased as soon as practicable after receipt of the notice, the payment and the signed Stock Restriction Agreement (if applicable). The certificate evidencing the ownership of the Common Stock of the Corporation will be registered in the name of the person indicated in the notice, or if none, then in the name of the Participant or Representative. The certificate will be delivered to the Participant or Representative as provided in the notice, or to others, if so provided in the notice. All shares of Common Stock that will be purchased upon the exercise of the Option as provided in the Plan will be fully paid and nonassessable.

13. Nontransferability of Options. Except as provided in the Plan or the Stock Option Agreement, no Participant, Representative, or any other person or entity may Transfer an Option in any way (whether by operation of law or otherwise), other than by will or the laws of descent and distribution. The Option is exercisable during a Participant's lifetime only by the Participant or his Representative. The Option will not be subject to execution, attachment, or similar process. Any attempted Transfer contrary to the provisions of the Plan or the Stock Option Agreement, and the levy, attachment, or any similar process upon the Option will be null and void and without effect. The Corporation will have the right to terminate the Option in the event of any Transfer of the Option, or levy, attachment or similar process, by notice to that effect to the person entitled to exercise the Option under the Plan, provided that termination of the Option will not prejudice any rights or remedies which the Corporation may have under the Plan, the Stock Option Agreement, or otherwise.

14. Termination. In the event that the Participant is terminated, any unexercised Incentive Stock Options held by the Participant must be exercised as follows:

a. Within twelve (12) months after Termination of Employment if such termination is the result of the Participant's disability as defined in Internal Revenue Code Section 22(e)(3), or

b. Within three (3) months after Termination of Employment, if such termination is for any other reason, except the death or disability of the Participant or as provided in paragraph 14.c. below. Any unexercised Option at the end of the three-month period will expire automatically.

c. The Corporation may cancel and rescind grants of Options if the Termination of Employment is for cause, or if during the three-month period after Termination of Employment, the former employee engages in conduct, which would have constituted cause for Termination of Employment. This is at the sole discretion of the Board of Directors.

15. Death of a Participant. If a Participant is terminated because of Participant's death (or the Participant dies within three months after a Termination other than for Cause), then Participant's Option may be exercised, to the extent that the Participant will have been entitled to do so at the date of his death, by his Representative within twelve months of the date of the Participant's death, unless the Option expires earlier by its own terms or by the terms of the Plan. Any portion of the Option, which is not exercised at the end of the twelve-month period, will expire automatically.

16. Administration of the Plan. The Board of Directors of the Corporation will administer the Plan. Subject to the provisions of the Plan, the Board of Directors may adopt such rules and regulations for interpreting and carrying out this Plan, as it may deem necessary, desirable or convenient. All questions of interpretation and application of the Plan and any Options issued under it will be determined solely by the Board of Directors. The determination of the Board of Directors will be final and binding upon all parties.

a. Powers of the Board of Directors. In particular, the Board of Directors will have the authority to determine the following:

(1) The Participants who will be granted Options;

(2) The number of Options to be made available;

(3) The number of shares of Common Stock to be covered by each Option;

(4) The Option Price, subject to the limits established in the Plan;

(5) The times at which such Options will be granted;

(6) The conditions on exercise of any Options;

(7) Additional terms, conditions and restrictions in the Stock Option Agreement;

(8) When or whether a Participant is disabled (based upon written opinions from two medical doctors);

(9) Whether and for what reason an employee of Corporation has incurred a Termination of Employment;

(10) Appointment and compensation of agents, counsel, auditors or other specialists to aid it in the discharge of its duties; and

(11) Construction and interpretation of this Plan and any Stock Option Agreement and all other actions and determinations deemed necessary or advisable for the administration of this Plan.

b. Authority to Require Conditions Precedent. The Board of Directors may impose upon any and all Participants any conditions precedent to the receipt of Options under this Plan which it may deem appropriate to assure that the Corporation will secure the expected benefits from granting such Options, including, without limitation a requirement that a Participant agree to remain in the employ of the Corporation for a specified period or that a Participant agree in writing that, in the event the Participant ceases to be an employee, director, officer, advisor or consultant of the Corporation for any reason, he will not, for a specified period from the date of such cessation, engage in any activity or business which would be competitive with the business of the Corporation, or that the Participant will not disclose any trade secrets of the Corporation.

c. Modifications to the Plan: The Corporation's Board of Directors may at any time and from time to time modify and amend the Plan in such manner as the Board of Directors deems advisable, but may not, without the approval of the Corporation's shareholders, make any alteration in the Plan (except as provided in Paragraph 17) which operates (i) to increase the total number of shares which may be issued under the Plan, (ii) to extend the term during which Options may be granted under the Plan, (iii) to permit the exercise of an Option after the date on which the Option would otherwise expire pursuant to its terms or (iv) to reduce the Option price per share after the Option is granted. No notice to eligible employees, Participants, or Representatives need be given by the Board of Directors upon a modification. The Board may not amend the Plan in any manner which would have the effect of preventing Incentive Stock Options issued under the Plan from being incentive stock options as defined in Section 422 of the Internal Revenue Code of 1986, as amended.

d. Termination of the Plan. The Board of Directors may terminate the Plan at any time upon 30 days written notice to the Participants or Representatives of the date fixed for termination, provided however that no such action shall deprive a Participant, without his or her consent, of any Option granted pursuant to the Plan unless the termination of the Plan is a result of the occurrence of an event specified in Paragraph 17. Upon the occurrence of an event specified in Paragraph 17 and a decision by the Board of Directors to terminate the plan, the Participant or Representative may exercise Options at any time during the 30-day period, unless the Option expired earlier.

17. Adjustments.

a. Changes in Capital Structure: In the event that the outstanding shares of the Corporation's Common Stock is changed by a stock dividend, recapitalization, stock split,

reverse stock split, subdivision, combination, reclassification or similar change in the capital structure of the Corporation without consideration, then (a) the number of shares reserved for issuance under this Plan, and (b) the Exercise Prices of and number of shares subject to outstanding Options will be proportionately adjusted, subject to any required action by the Board or the shareholders of the Company and compliance with applicable securities laws; provided, however, that fractions of a share will not be issued but will either be paid in cash at Fair Market Value of such fraction of a share or will be rounded down to the nearest whole share, as determined by the Board of Directors.

b. Dissolution or Liquidation: In the event of the dissolution or liquidation of the Corporation, any Option granted under the Plan will expire as of the date to be fixed by the Board of Directors pursuant to Paragraph 16.d.

c. Corporate Transaction: The term "Corporate Transaction" will mean (i) a merger or consolidation in which securities possessing more than 50% of the total combined voting power of the Corporation's outstanding securities are transferred to a person or persons different from the persons holding those securities immediately prior to such transaction or (ii) the sale, transfer or other disposition of all or substantially all of the Corporation's assets in complete liquidation or dissolution of the Corporation.

In the event of any Corporate Transaction, each outstanding option shall accelerate so that each such option shall, immediately prior to the effective date of the Corporate Transaction, become fully exercisable for all of the shares of Common Stock at the time subject to such option and may be exercised for any or all of those shares as fully vested shares of Common Stock. However, an outstanding option under the Plan shall not so accelerate if and to the extent the acceleration of such option is subject to other limitations imposed by the Board of Directors at the time of the option grant and recorded in the agreements evidencing such option.

Immediately following the consummation of the Corporate Transaction, all outstanding options shall terminate and cease to be outstanding.

18. Participant's Employment. Nothing in this Plan or related documents will be construed to create or imply any contract of employment between a Participant and the Corporation or confer upon the Participant any right to continue in the employ of the Corporation, nor will it affect or restrict the right of the Corporation to terminate such employment at any time. Unless otherwise expressly set forth in a separate employment agreement between the Participant and the Corporation or its subsidiaries, the employment of a Participant is at-will, and the Participant or Corporation may terminate employment at any time for any reason, with or without cause.

19. No Rights of Shareholder. No Participant or Representative will have rights as a shareholder with respect to any shares covered by an Option until the date of issuance of a stock certificate for shares of Common Stock, following the exercise of an Option. No Participant or Representative will have rights with respect to dividends or other distributions for which a record date is established prior to the date the stock certificate is issued.

20. No Obligation to Disclose. The Corporation will have no duty or obligation to affirmatively disclose to an employee, Participant or Representative any material information regarding the Corporation at any time prior to or in connection with the grant or exercise of an Option.

21. Restriction on Issuance of Shares. Each Option granted under the Plan will be subject to the requirement that if the Board of Directors determines in its sole discretion that the listing, registration or qualification on any securities exchange or pursuant to any state or federal law, or the consent or approval of any governmental regulatory body is necessary or desirable in connection with the granting of the shares covered by the Option or the purchase of such shares, then no Option may be exercised in whole or in part unless such listing, registration, qualification, consent or approval has been effected or obtained free of any conditions not acceptable to the Board of Directors.

22. Registration Under Securities Laws. The Common Stock, which is the subject of these Options, has not been registered under the Securities Act of 1933. Therefore, all shares of stock issued upon exercise of an Option must be held for investment purposes.

23. Legend. All shares of stock issued pursuant to the Plan and the Stock Option Agreement will bear a legend stating the following restriction or an abbreviation thereof:

> "The shares of stock represented by this certificate (1) have not been registered under the Securities Act of 1933 or under the securities laws of any state and may not be sold or transferred except upon such registration or upon receipt by the Corporation of an opinion of counsel satisfactory to the Corporation, that registration is not required for such sale or transfer; and (2) are subject to certain restrictions upon the transfer thereof, and to certain rights and obligations, all as more specifically set forth in the Exagen Corporation Stock Option Plan and the Exagen Corporation Stock Option Agreement. Copies of the Plan and the Stock Option Agreement are available for inspection at the registered office of the Corporation."

24. Consultation With Advisors. Each Participant or Representative is expected to consult his own advisors with respect to the tax and securities consequences of holding an Option or exercising an Option.

25. Indemnification. In addition to any other rights of indemnification granted by a third party or by law, the Corporation will indemnify, defend and hold harmless the Board of Directors (collectively), and the individual members of the Board of Directors, against the reasonable expenses, (including attorneys' fees), actually and necessarily incurred in connection with the defense of any action, suit or proceeding, or any threat thereof, or in connection with any appeal, to which they or any of them may be a party by reason of any act or omission in connection with the Plan or any Option granted by them, and against all amounts paid by them in settlement thereof (provided such settlement is approved by legal counsel selected by the Corporation) or paid by them in satisfaction of a judgment in any action, suit or proceeding, unless it is adjudged in such action, suit or proceeding that such indemnified party is liable for gross negligence or gross misconduct in the performance of his duties; provided that within

60 days after institution of any such action, suit or proceeding the indemnified party may in writing elect to defend the same at its sole expense, and if such election is made, the Corporation will have no further liability or obligations to the indemnified party under this Section.

26. Governing Law. The Plan will be governed by the law of the State of New Mexico (other than its law respecting choice of law), and will be interpreted under, construed under and enforced pursuant to the internal laws of the state of New Mexico applicable to agreements made and to be performed wholly within the State of New Mexico.

27. Severability. If any provision of this Plan is for any reason held to be invalid or unenforceable, such invalidity or unenforceability will not affect any other provision thereof, and this Plan will be construed as if such invalid or unenforceable provision were omitted.

28. Binding Effect. Any actions taken under the provisions of this Plan and any rules adopted by the Board of Directors will bind the Corporation and all recipients of Options pursuant to this Plan. This Plan will inure to the benefit of and be binding upon the Corporation, its employees, and their respective successors, heirs and assigns.

29. Withholding Taxes. To the extent that the Corporation is required to withhold federal, state, local or foreign taxes in connection with any payment made or benefit realized by a Participant or other person under this Plan, and the amounts available to the Corporation for the withholding are insufficient, it shall be a condition to the receipt of any such payment or the realization of any such benefit that the Participant or such other person make arrangements satisfactory to the Corporation for payment of the balance of any taxes required to be withheld.

30. Certain Terminations of Employment or Consulting Services, Hardships and Approved Leaves of Absence. Notwithstanding any other provision of this Plan to the contrary, in the event of termination of employment or consulting services by reason of death, disability, normal retirement, early retirement, with the consent of the Corporation, termination of employment or consulting services to enter public service with the consent of the Corporation or leave of absence approved by the Corporation, or in the event of hardship or other special circumstances, of a Participant who holds an Option that is not immediately and fully exercisable, the Board of Directors may take any action that it deems to be equitable under the circumstances or in the best interests of the Corporation, including without limitation, waiving or modifying any limitation or requirement with respect to any award under this Plan.

EXAGEN DIAGNOSTICS, INC.

STOCK OPTION PLAN
STOCK OPTION AGREEMENT # [__]

This Stock Option Agreement ("Agreement") is made and entered into effective as of the Date of Grant set forth below (the "Date of Grant") by and between Exagen Diagnostics, Inc., a Delaware corporation (the "Company"), and the participant named below ("Participant") pursuant to the Company's Stock Option Plan (the "Plan"). Capitalized terms not defined herein will have the meaning ascribed to such terms in the Plan.

Participant: _____
Social Security Number: _____
Address: _____
_____
Total Option Shares: _____
Exercise Price Per Share: _____
Date of Grant: _____
Vesting Dates: _____
_____
_____
Expiration Date: _____
Type of Stock Option
(*Check one*): **[ ] Incentive Stock Option**
[ ] Nonqualified Stock Option

1. Grant of Option. The Company hereby grants to Participant an option (the "Option") to purchase the total number of shares of Common Stock ($.001 par value per share) of the Company set forth above (the "Shares") at the Exercise Price Per Share set forth above (the "Exercise Price"), subject to all of the terms and conditions of this Agreement and the Plan. In consideration of and as a precondition to the grant of the Option, Participant, on behalf of Participant and all persons or parties claiming through the Participant, including any successor or assign, as of the date hereof forever waives, releases, discharges and covenants not to sue the Company or its successors, assigns, shareholders, affiliates, partners, officers, directors, employees, agents, attorneys, accountants, and representatives from or on any and all past, present, or future claims, demands, causes of action, suits, damages, costs, expenses, losses, liabilities or obligations, whatsoever, whether at law or equity, know or unknown, arising directly or indirectly from or in connection with any stock option previously granted to Participant by the Company.

2. Exercise Period.

2.1 Exercise Period of Option. As stated pursuant to the vesting dates above.

2.2 Vesting of Options. Shares that are vested pursuant to the schedule set forth in Section 2.1 hereof are "Vested Shares". Shares that are not vested pursuant to the schedule set forth in Section 2.1 hereof are "Unvested Shares".

2.3 Expiration. These Options will expire on the Expiration Date set forth above and must be exercised, if at all, on or before the Expiration Date.

3. Termination. If Participant is terminated for Cause, then this Option will expire on Participant's Termination Date, or at such later time and on such conditions as determined by the Board of Directors. In the event of termination for any other reason, this Option will be exercisable, as to Vested Shares, in accordance with the terms of the Plan.

4. Non-transferability of Option. This Option may not be transferred in any manner other than by will or the laws of descent and distribution and, during the Participant's lifetime, may be exercised only by Participant. The terms of this Option will be binding upon the successors and assigns of Participant.

5. Tax Consequences. Set forth below is a brief summary as of the Effective Date of the Plan of some of the tax consequences of exercise of this Option and disposition of the Shares. THIS SUMMARY IS NECESSARILY INCOMPLETE, AND THE TAX LAWS AND REGULATIONS ARE SUBJECT TO CHANGE. PARTICIPANT SHOULD CONSULT A TAX ADVISER BEFORE EXERCISING THE OPTION OR DISPOSING OF THE SHARES.

5.1 Exercise of ISO. If this Option qualifies as an ISO, there will be no regular federal or state income tax liability upon the exercise of this Option, although the excess, if any, of the Fair Market Value of the Shares on the date of exercise over the Exercise Price will be treated as a tax preference item for federal income tax purposes and may subject the Participant to the alternative minimum tax in the year of exercise.

5.2 Exercise of Nonqualified Stock Option. If this Option does not qualify as an ISO, there may be a regular federal and state income tax liability upon the exercise of this Option. Participant will be treated as having received compensation income (taxable at ordinary income tax rates) equal to the excess, if any, of the Fair Market Value of the Shares on the date of exercise over the Exercise Price. If Participant is or was an employee of the Company, the Company will be required to withhold from Participant's compensation or collect from Participant and pay to the applicable taxing authorities an amount equal to a percentage of this compensation income at the time of exercise.

6. Governing Plan Document. The Option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of the Option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. In the event of any conflict between the provisions of the Option and those of the Plan, the provisions of the Plan shall control.

7. Entire Agreement. The Plan is incorporated herein by reference. A copy of the Plan may be obtained from the Corporation. This Agreement and the Plan constitute the entire agreement of the parties and supersede all prior undertakings and agreements with respect to the subject matter hereof.

8. Acceptance. Participant hereby acknowledges receipt of a copy of the Plan and this Agreement. Participant has read and understands the terms and provisions thereof, and accepts this Option subject to all the terms and conditions of the Plan and this Agreement. Participant acknowledges that there may be adverse tax consequences upon exercise of this Option or disposition of the Shares and that Participant should consult a tax adviser prior to such exercise or disposition.

EXAGEN DIAGNOSTICS, INC:

By: _____
Name: _____
Title: _____

PARTICIPANT:

By: _____
Name _____

EXAGEN DIAGNOSTICS, INC.
2013 STOCK OPTION PLAN

1. Purposes of the Plan. This purpose of this Stock Option Plan (as more fully defined as "Plan" below) is to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Corporation (as defined below). The Plan provides for options, which qualify as incentive stock options pursuant to Section 422 of the Code as well as options which do not so qualify.

2. Effective Date and Duration of Plan. The Plan will become effective immediately upon its adoption by the Board of Directors of the Corporation. The Plan is subject to approval by the shareholders of the Corporation within 12 months before or after the date the Board of Directors adopts the Plan. The Plan will terminate on December 31, 2022, or at an earlier time as the Board of Directors may fix, and no Option will be granted under the Plan after that date. An Option outstanding at the date of termination will remain in effect until it is exercised, expires, or is otherwise canceled, settled or terminated as provided herein or in the applicable Stock Option Agreement.

3. Definitions. The following terms are used throughout the Plan, and whenever used in the capitalized form, except as otherwise expressly provided, the term will be deemed to have the following meaning:

a. "Affiliate" means any individual, corporation, partnership, association, joint-stock company, trust, unincorporated association or other entity (other than the Corporation) that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with the Corporation.

b. "Board of Directors" means the Board of Directors of the Corporation, or any committee of the Board of Directors established and authorized by the Board of Directors to carry out the obligations of the Board of Directors under the Plan.

c. "Cause" means:

(1) any act or omission defined in any employment agreement or arrangement in existence on the date of Termination between the Participant and the Corporation or Affiliate which permits the Corporation or Affiliate to terminate the employment agreement or arrangement between the Participant and the Corporation or Affiliate, for cause, or

(2) in the event there is no employment agreement or arrangement in existence between the Participant and the Corporation or Affiliate at Termination, or if the term "cause" is not defined in the employment agreement or arrangement, "Cause" means (a) any act or omission of a criminal nature, or any act of malfeasance or wrongdoing affecting the Corporation or an Affiliate the result of which is detrimental to the interests of the Corporation or an Affiliate; (b) the material breach of a fiduciary duty owing to the Corporation or Affiliate, including without limitation, fraud and embezzlement; (c) conduct or the omission of conduct on the part of the Participant which constitutes a material breach of any statutory or common-law duty of loyalty to the Corporation or its Affiliate; (d) the breach of any covenant not to compete

with the Corporation or its Affiliate; or (e) engaging in any act of disloyalty or any conduct clearly tending to bring discredit upon the Corporation or its Affiliate, or any conduct which causes or reasonably could cause substantial harm to the Corporation or its Affiliate, as determined by the Board of Directors in their sole discretion.

d. "Common Stock" means the shares of the common stock of the Corporation that are the subject of this Plan under Paragraph 4, whether now issued or to be issued in the future, and any other stock or security resulting from adjustments made in Paragraph 16.

e. "Code" means the Internal Revenue Code of 1986, as amended, and the rules and regulations promulgated thereunder.

f. "Corporation" means Exagen Diagnostics, Inc., and includes any successor or assignee corporation(s) into which the Corporation may be merged, changed or consolidated, any corporation for whose securities the securities of the Corporation will be exchanged, and any assignee of or successor to substantially all of the assets of the Corporation.

g. "Disability" means "disability" as defined in Section 22(e)(3) of the Code.

h. "Fair Market Value" means the price per share of Common Stock on any relevant date as determined in accordance with the following provisions:

(1) If the Common Stock is at the time listed on any stock exchange, then the Fair Market Value shall be the closing selling price per share of Common Stock on the date in question on the stock exchange determined by the Board of Directors to be the primary market for the Common Stock, as such price is officially quoted in the composite tape of transactions on such exchange and published in The Wall Street Journal. If there is no closing selling price for the Common Stock on the date in question, then the Fair Market Value shall be the closing selling price on the last preceding date for which such quotation exists.

(2) If the Common Stock is at the time not listed on any stock exchange, then the Fair Market Value shall be determined by the Board of Directors in accordance with Section 409A of the Code after taking into account such factors as the Board of Directors shall deem appropriate.

i. "Greater Than 10% Shareholder" means a Participant who at the time of the grant of the Option owns more than ten percent of the total combined voting power of all classes of stock of the Corporation or its Affiliates after taking into account the constructive ownership rules of Section 424(d) of the Code. For purposes of this definition, a Participant is considered to own the stock owned, directly or indirectly, by or for the Participant's, spouse, ancestors (such as parents and grandparents), lineal descendants, and siblings (whether by whole or half blood), as well as a proportional interest of stock owned, directly or indirectly, by or for a corporation, partnership, trust, or estate of which the Participant is a shareholder, partner, or beneficiary.

j. "Incentive Stock Option" means an Option that is intended to qualify as an "incentive stock option" under Section 422 of the Code or any successor provision thereto.

k. "Management Objectives" means the performance objectives established pursuant to this Plan, which may include, but not be limited to, (1) objectives relating to Corporation-wide performance or (2) objectives relating to the performance of a Participant, the division, department or function within the Corporation or an Affiliate by which a Participant is employed or with respect to which the Participant provides consulting services. The Board of Directors may adjust Management Objectives and the related minimum acceptable level of achievement if, in the sole judgment of the Board of Directors, events or transactions have occurred after the Option Grant Date that are unrelated to the performance of the Participant and result in distortion of the Management Objectives or the related minimum acceptable level of achievement.

l. "Nonqualified Option" means an Option that is not intended to qualify as an Incentive Stock Option.

m. "Option" means an Incentive Stock Option or Nonqualified Option to purchase Common Stock in the Corporation granted under the Plan.

n. "Option Grant Date" means the date on which the Board of Directors authorizes the grant to a Participant of an Option.

o. "Option Price" means the price at which the Corporation's Common Stock may be purchased under an Option as provided in the applicable Stock Option Agreement.

p. "Participant" means a person who is selected by the Corporation to receive an Option.

q. "Plan" means the Exagen Diagnostics, Inc. 2013 Stock Option Plan, as set forth in this document and as amended from time to time.

r. "Representative" means, if the Participant is living, but incapacitated, the person or entity acting as the conservator, guardian or temporary guardian of the Participant or as his attorney-in-fact or agent under a valid durable power of attorney. If the Participant has died, then "Representative" means: (a) the person or entity acting as the personal representative of a Participant's estate pursuant to the last will and testament of a Participant or appointed by a judge in an in testate probate action, or, if applicable, (b) the person or entity which is the beneficiary of the Participant.

s. "Stock Option Agreement" means an agreement entered into between a Participant and the Corporation as described in Paragraphs 7 and 8.

t. "Stock Restriction Agreement" means an agreement in the form prescribed by the Corporation whereby stock of the Corporation is subject to certain restrictions and the Corporation is given certain rights to require the sale of stock upon the occurrence of certain events or, if a restriction is violated.

u. "Termination" means, for purposes of this Plan with respect to a Participant, that the Participant no longer is providing services to the Corporation as an employee, officer, director or consultant.

v. "Transfer" means any sale, gift, assignment, distribution, conveyance, pledge, hypothecation, encumbrance, or other transfer of title, whether by operation of law or otherwise.

4. Stock Subject to the Plan.

a. Subject to adjustment as provided in Paragraph 16, an aggregate of 1,708,080 shares of the Corporation's common stock will be available for issuance pursuant to the grant of Options. The shares will be authorized and either unissued or issued shares of common stock of the Corporation that have been reacquired by the Corporation and held as treasury shares. Options which remain unissued at the termination of this Plan will cease to be reserved for the purpose of the Plan, but until termination of the Plan, the Corporation will at all times reserve a sufficient number of shares of common stock of the Corporation to meet the requirements of the Plan.

b. If any Option granted is subsequently cancelled, forfeited, expires or is terminated for any reason without having been exercised, any shares of Common Stock subject to such Option will again be available and may thereafter be granted or otherwise applied under this Plan.

5. Term of Options. Options will be granted for such terms as the Board of Directors will determine, but no Incentive Stock Option will be exercisable after ten years from the Option Grant Date. Notwithstanding the above, if an Incentive Stock Option is granted to a Participant who is a Greater Than 10% Shareholder at the time the Incentive Stock Option is granted, the term with respect to such Incentive Stock Option will not be in excess of five years from the Option Grant Date. The term of any Incentive Stock Option may be subject to termination prior to the expiration of the ten-year period (or five-year period in the case of a Greater Than 10% Shareholder) as provided in the Plan or applicable Stock Option Agreement.

6. Eligible Employees; Successive Grants. Incentive Stock Options may be granted only to employees (including officers and directors who are also employees) of the Corporation. Nonqualified Options may be granted to employees, officers, directors and consultants of the Company, provided that such consultants render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction. The Corporation, by action of the Board of Directors and subject to the provisions of the Plan, may grant Options to individuals selected by the Board of Directors of such number of shares as may be determined by the Board of Directors. In making this selection the Board of Directors may give consideration to the functions and responsibilities of the respective individual, the present and potential contributions of such individual to the Corporation, the value of the individual's service to the Corporation and such other factors deemed relevant by the Board of Directors in its sole discretion. Successive grants may be made to the same Participant regardless of whether any Options previously granted to the Participant remain unexercised and outstanding.

7. Granting of Option. The Corporation in its discretion may require as a condition of the granting of an Option that a Participant make any representation or warranty to the Corporation as the Board of Directors may deem appropriate, necessary, or required by any applicable law or regulation. This may include, but not be limited to, a representation or

warranty that the shares are being acquired only for investment and without any present intention to sell or distribute such shares. An Option will be deemed to have been granted only when (i) the Board of Directors has designated the Participant to receive an Option and determined the number of shares to be granted and the exercise price of the Option and (ii) a Stock Option Agreement has been executed by the Corporation and delivered or mailed to the selected individual. Nothing contained in the Plan or any resolution adopted or to be adopted by the Board of Directors, and no action taken by the Board of Directors will constitute the granting of any Option without the execution by the Corporation of a Stock Option Agreement. In addition, any grants of Options will be subject to the following conditions:

a. Each grant shall specify the conditions, if any, under which the Option shall become exercisable including, but not limited to, the period or periods of continuous employment, or continuous engagement of the consulting services, of the Participant by the Corporation or an Affiliate, or the achievement of Management Objectives, that are necessary before the Option, or installments thereof, shall become exercisable, and any grant may provide for the acceleration of the exercisability of an Option, including, without limitation, in the event of a change in control of the Corporation or other similar transaction or event.

b. Options granted may be Nonqualified Options, Incentive Stock Options, or combinations thereof, and the type of Option granted shall be set forth in the applicable Stock Option Agreement.

c. The aggregate Fair Market Value of the Common Stock subject to Incentive Stock Options, determined as of the Option Grant Date, which are first exercisable by a Participant during any calendar year under this Plan (or any other stock option plan required to be taken into account under Section 422(d) of the Code) shall not exceed $100,000. To the extent that the aggregate Fair Market Value of the Common Stock to which Incentive Stock Options are exercisable for the first time by any Participant during any calendar year (under all plans of the Corporation and its Affiliates) exceeds $100,000, such Incentive Stock Options will be treated as Nonqualified Options.

8. Acceptance of Option by Participant. Any person selected to receive an Option must elect to accept the Option under this Plan within ten business days after the date on which the Stock Option Agreement executed by the Corporation has been delivered or mailed to them. The person selected may elect to accept such Option by executing and delivering a copy of the Stock Option Agreement to the Corporation, and will at that time become a “Participant.” No Option granted may be exercised prior to such acceptance. If an Option is not accepted with the applicable ten-business day period, the Option will expire automatically at the end of the ten-day period, unless extended in writing by the President of the Corporation, and the person selected to receive such Option shall have no further rights with respect to that Option.

9. Option Price. The price per share of Common Stock purchasable under Options granted pursuant to the Plan may be equal to or greater than the Fair Market Value on the Option Grant Date, provided, however, that the Option Price with respect to each Incentive Stock Option shall not be less than 100% (or 110% in the case of a Greater Than 10% Shareholder) of the Fair Market Value on the Option Grant Date. The full Option Price for the shares purchased must be paid when the Option is exercised.

10. Exercise of Option in Installments. The Board of Directors may provide that an Option will vest over time and become exercisable in one or more installments. If an Option grant provides for the vesting of the Option in installments, a Participant will have the right, after the Option has been granted and accepted by the Participant as provided in the Plan, to exercise the Option and purchase from the Corporation the related number of shares of Common Stock only to the extent that the Option has vested in accordance with the dates and times provided for by the Board of Directors in the installment schedule included in the Stock Option Agreement. A Participant has no right whatsoever to exercise an Option, or any installment thereof, until the Option, or the installment thereof, has vested as provided in the Stock Option Agreement.

11. Method of Exercising Option. Subject to the terms and conditions of the Plan, the Participant or Representative may exercise an Option by delivery of written notice of intent to exercise the Option to the Corporation, at the corporate offices at 851 University Blvd SE, Suite 200, Albuquerque, NM, 87106.

a. Each notice must state the election to exercise the Option and the number of shares which are being purchased, indicate in what name the certificate will be issued (including joint tenancy with right of survivorship between the Participant and another person, if so opted and if permitted under the Stock Option Agreement and Stock Restriction Agreement), and will be signed by the Participant or Representative exercising the Option and, if the Participant is married, by his or her spouse. If a Representative is exercising the Option, the Representative will attach proof, satisfactory to the Corporation, of such person's right to exercise the Option as the Representative of the Participant. Each notice will be accompanied by a check payable to the order of the Corporation for the total Option Price for the shares being purchased. If the Corporation is required to withhold on account of any present or future tax imposed as a result of such exercise, the notice of exercise will be accompanied by a check payable to the order of the Corporation in the amount specified by the Corporation that is sufficient to cover any taxes required to be withheld by the Corporation.

b. If the Board of Directors requires the execution of a Stock Restriction Agreement, or other agreement, as a condition of exercise of an Option, the Stock Restriction Agreement, or other agreement, will be executed by the Participant or Representative and, if Participant is married, by his or her spouse before any certificate for Common Stock is issued.

c. The Corporation will deliver the certificate representing the shares of Common Stock purchased as soon as practicable after receipt of (i) the notice, (ii) the payment for the total Option Price and any applicable tax withholding, and (iii) the signed Stock Restriction Agreement or other agreement (if applicable). The certificate evidencing the ownership of the Common Stock of the Corporation will be registered in the name of the person indicated in the notice, or if none, then in the name of the Participant or Representative. The certificate will be delivered to the Participant or Representative as provided in the notice, or to others, if so provided in the notice. All shares of Common Stock that will be purchased upon the exercise of the Option as provided in the Plan will be fully paid and nonassessable.

12. Nontransferability of Options. Except as provided in the Plan or the Stock Option Agreement, no Participant, Representative, or any other person or entity may Transfer an Option in any way (whether by operation of law or otherwise), other than by will or the laws of descent

and distribution. The Option is exercisable during a Participant's lifetime only by the Participant or his Representative. The Option will not be subject to execution, attachment, or similar process. Any attempted Transfer of an Option contrary to the provisions of the Plan or the Stock Option Agreement, and the levy, attachment, or any similar process upon the Option will be null and void and without effect. In the event of any Transfer of the Option, or levy, attachment or similar process, the Corporation will have the right to terminate the Option by notice to that effect to the person entitled to exercise the Option under the Plan, provided that the termination of the Option will not prejudice any rights or remedies which the Corporation may have under the Plan, the Stock Option Agreement, or otherwise.

13. Termination. Unless otherwise specified in a Stock Option Agreement, in the event that a Participant is terminated:

a. Any unexercised Incentive Stock Options held by the Participant must be exercised as follows:

(1) Within twelve (12) months after Termination of Employment if such termination is the result of the Participant's disability as defined in Section 22(e)(3) of the Code and any such Option that is unexercised at the end of the twelve-month period will expire automatically, or

(2) Within three (3) month after Termination, if such termination is for any reason other than the death or disability of the Participant or as provided in Paragraph 13.b. below, and any such Option that is unexercised at the end of the three-month period will expire automatically.

b. Notwithstanding any other provision of the Plan, unless otherwise provided in the applicable Stock Option Agreement, an Option (whether vested or unvested) will terminate automatically if (i) the Participant's Termination is for Cause or (ii) during any post-Termination period in which the Option may be exercised, the Participant engages in conduct that would have constituted Cause.

14. Death of a Participant. If a Participant's Termination is on account of the Participant's death (or the Participant dies within three months after a Termination other than for Cause), any Option held by the Participant may be exercised, to the extent that the Participant will have been entitled to do so on the date of the Participant's death, by the Participant's Representative within twelve months of the date of the Participant's death, unless such an Option expires earlier under the terms of the applicable Stock Option Agreement or the Plan. Any Option or portion thereof which is not exercised at the end of the twelve-month period will expire automatically.

15. Administration of the Plan. The Board of Directors of the Corporation will administer the Plan. Subject to the provisions of the Plan, the Board of Directors shall have full power, authority, and discretion to make such interpretations and determinations and to adopt, amend, and rescind such rules and regulations for the administration of the Plan and Options, as it may deem necessary, desirable or convenient, in its sole discretion. Any interpretation or determination of the Board of Directors will be final and binding upon all parties.

a. Powers of the Board of Directors. In particular, the Board of Directors will have the authority to determine the following:

(1) The persons who will be granted Options;

(2) The number of Options to be made available;

(3) The number of shares of Common Stock to be covered by each Option;

(4) The Option Price, subject to the limits established in the Plan;

(5) The times at which Options will be granted

(6) The conditions on exercise of any Options;

(7) Additional terms, conditions and restrictions to be included in Stock Option Agreements;

(8) When or whether a Participant is disabled (based upon written opinions from two medical doctors);

(9) Whether and for what reason an employee of the Corporation or an Affiliate has incurred a Termination;

(10) Appointment and compensation of agents, counsel, auditors or other specialists to aid it in the discharge of its duties with respect to the Plan; and

(11) Construction and interpretation of this Plan and any Stock Option Agreement and all other actions and determinations deemed necessary or advisable for the administration of this Plan.

b. Authority to Require Conditions Precedent. The Board of Directors may impose upon any and all Participants any conditions precedent to the receipt of Options under this Plan which it may deem appropriate to assure that the Corporation will secure the expected benefits from granting Options, including, without limitation a requirement that a Participant agree to remain in the employ of the Corporation for a specified period or that a Participant agree in writing that, in the event the Participant ceases to be an employee, director, officer, advisor or consultant of the Corporation for any reason, the Participant will not, for a specified period from the date of such cessation, engage in any activity or business which would be competitive with the business of the Corporation, or that the Participant will not disclose any trade secrets of the Corporation.

c. Modifications to the Plan: The Corporation's Board of Directors may at any time and from time to time modify and amend the Plan in such manner as the Board of Directors deems advisable, but may not, without the approval of the Corporation's shareholders, make any alteration in the Plan (except as provided in Paragraph 16) which operates (i) to increase the total number of shares which may be issued under the Plan, (ii) to extend the term

during which Options may be granted under the Plan, or (iii) to reduce the Option price per share after the Option is granted. No notice to eligible employees, Participants, or Representatives need be given by the Board of Directors upon a modification. The Board may not amend the Plan in any manner which would have the effect of preventing Incentive Stock Options issued under the Plan from being incentive stock options as defined in Section 422 of the Code. Without any obligations to do so, the Board of Directors may amend any Option, without the consent of the Participant, as necessary to comply with applicable laws or to have such Option comply with the requirements of Section 409A of the Code or an applicable exception thereto.

d. Termination of the Plan. The Board of Directors may terminate the Plan at any time upon 30 days written notice to the Participants or Representatives of the date fixed for termination; provided, however. no such action shall deprive a Participant, without his or her consent, of any Option granted pursuant to the Plan unless the termination of the Plan is a result of the occurrence of an event specified in Paragraph 16. Upon the occurrence of an event specified in Paragraph 16 and a decision by the Board of Directors to terminate the Plan, the Participant or Representative may exercise Options at any time during the 30-day period specified in the preceding sentence or, if earlier, until the date on which the Option otherwise would expire by its terms, and all Options (whether vested or unvested) shall expire automatically on the date that the Plan terminates.

16. Adjustments.

a. Changes in Capital Structure: In the event that the outstanding shares of the Corporation's Common Stock is changed by a stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in the capital structure of the Corporation without consideration, then (a) the number of shares reserved for issuance under this Plan, and (b) the Exercise Prices of and number of shares subject to outstanding Options will be proportionately adjusted, as determined by the Board of Directors in its sole discretion, subject to any required action by the Board of Directors or the shareholders of the Corporation and compliance with applicable securities laws; provided, however, fractional shares will be rounded down to the nearest number of whole shares.

b. Dissolution or Liquidation: In the event of the dissolution or liquidation of the Corporation, any Option granted under the Plan will expire as of the date to be fixed by the Board of Directors pursuant to Paragraph 15.d.

c. Corporate Transaction:

(1) The term "Corporate Transaction" will mean (i) a merger or consolidation in which securities possessing more than 50% of the total combined voting power of the Corporation's outstanding securities are transferred to a person or persons different from the persons holding those securities immediately prior to such transaction or (ii) the sale, transfer or other disposition of all or substantially all of the Corporation's assets in complete liquidation or dissolution of the Corporation.

(2) Except as otherwise set forth in a Stock Option Agreement, in the event of any Corporate Transaction, each outstanding Option shall become fully vested and shall

be exercisable for the 30-day period immediately preceding the consummation of the Corporate Transaction; provided, however, that the exercise of any portion of an Option during such 30-day period that would not have been vested but for this provision is contingent upon and subject to the consummation of the Corporate Transaction and such exercise and accelerated vesting pursuant to this paragraph will be rescinded if such Corporate Transaction is not consummated.

(3) The Board of Directors shall have complete discretion to provide, on such terms and conditions as it deems appropriate and without the consent of the Participant, to terminate an outstanding Option pursuant to a Corporate Transaction in exchange for a cash payment, to be made to the Participant, equivalent to the difference between (i) the aggregate Fair Market Value of the shares of Common Stock subject to the Option immediately prior to the consummation of the Corporate Transaction and (ii) the aggregate Option Price for such shares.

(4) Any Options that are outstanding as of the consummation of the Corporate Transaction shall expire automatically, except to the extent Options are assumed by a successor to the Corporation or otherwise continued in effect pursuant to the terms of the Corporate Transaction.

17. Participant's Employment. Nothing in this Plan or related documents will be construed to create or imply any contract of employment between a Participant and the Corporation, confer upon the Participant any right to continue in the employ of the Corporation, or right to continue to provide services to the Corporation, nor will it affect or restrict the right of the Corporation to terminate such employment or services at any time. Unless otherwise expressly set forth in a separate employment agreement or other agreement between the Participant and the Corporation or an Affiliate, the employment of or engagement to render services by a Participant is at-will, and the Participant or Corporation may terminate such employment or engagement at any time for any reason, with or without Cause.

18. No Rights of Shareholder. No Participant or Representative will have rights as a shareholder with respect to any shares covered by an Option until the date of issuance of a stock certificate for shares of Common Stock, following the proper exercise of an Option. No Participant or Representative will have rights with respect to dividends or other distributions for which a record date is established prior to the date the stock certificate is issued.

19. No Obligation to Disclose. The Corporation will have no duty or obligation to affirmatively disclose to an employee, Participant or Representative any material information regarding the Corporation at any time prior to or in connection with the grant or exercise of an Option.

20. Restriction on Issuance of Shares. Each Option granted under the Plan will be subject to the requirement that if the Board of Directors determines, in its sole discretion, that the listing, registration or qualification on any securities exchange or pursuant to any state or federal law, or the consent or approval of any governmental regulatory body is necessary or desirable in connection with the granting of the shares covered by the Option or the purchase of such shares, then no Option may be exercised in whole or in part unless such listing, registration, qualification, consent or approval has been effected or obtained free of any conditions not acceptable to the Board of Directors.

21. Registration Under Securities Laws. The Common Stock, which is the subject of these Options, has not been registered under the Securities Act of 1933. Therefore, all shares of stock issued upon exercise of an Option must be held for investment purposes.

22. Legend. All shares of Common Stock issued pursuant to the Plan and the Stock Option Agreement will bear a legend stating the following restriction or an abbreviation thereof:

> "The shares of stock represented by this certificate (1) have not been registered under the Securities Act of 1933 or under the securities laws of any state and may not be sold or transferred except upon such registration or upon receipt by the Corporation of an opinion of counsel satisfactory to the Corporation, that registration is not required for such sale or transfer; and (2) are subject to certain restrictions upon the transfer thereof, and to certain rights and obligations, all as more specifically set forth in the Exagen Diagnostics, Inc. Stock Option Plan and the Exagen Diagnostics, Inc. Stock Option Agreement. Copies of the Plan and the Stock Option Agreement are available for inspection at the registered office of the Corporation."

Shares of Common Stock issued under the Plan may bear such other legends or restrictions as the Board of Directors determines is necessary or advisable.

23. Consultation With Advisors. Each Participant or Representative is expected to consult his own advisors with respect to the tax and securities consequences of holding an Option and exercising an Option.

24. Indemnification. In addition to any other rights of indemnification granted by a third party or by law, the Corporation will indemnify, defend and hold harmless the Board of Directors (collectively), and the individual members of the Board of Directors, against the reasonable expenses, (including attorneys' fees), actually and necessarily incurred in connection with the defense of any action, suit or proceeding, or any threat thereof, or in connection with any appeal, to which they or any of them may be a party by reason of any act or omission in connection with the Plan or any Option granted by them, and against all amounts paid by them in settlement thereof (provided such settlement is approved by legal counsel selected by the Corporation) or paid by them in satisfaction of a judgment in any action, suit or proceeding, unless it is adjudged in such action, suit or proceeding that such indemnified party is liable for gross negligence or gross misconduct in the performance of his duties; provided, however, that within 60 days after institution of any such action, suit or proceeding the indemnified party may in writing elect to defend the same at its sole expense, and if such election is made, the Corporation will have no further liability or obligations to the indemnified party under this paragraph.

25. Governing Law. The Plan will be governed by the law of the State of New Mexico (other than its law respecting choice of law), and will be interpreted under, construed under and enforced pursuant to the internal laws of the state of New Mexico applicable to agreements made and to be performed wholly within the State of New Mexico.

26. Severability. If any term, provision, covenant, paragraph, or condition of the

Plan, Stock Option Agreement or any other documents or materials relating to the Plan is held to be invalid, illegal, or unenforceable by any court or arbitrator of competent jurisdiction, as to such jurisdiction, that provision shall be limited ("blue-penciled") to the minimum extent necessary so that the Plan, Stock Option Agreement, document, or material, as applicable, shall otherwise remain enforceable in full force and effect. To the extent such provision cannot be so modified, the offending provision shall, as to such jurisdiction, be deemed severable from the remainder of the Plan, Stock Option Agreement, document, or material, as applicable, and the remaining provisions thereof shall be construed to preserve, to the maximum permissible extent, the intent and purposes thereof.

27. Binding Effect. Any actions taken under the provisions of this Plan and any rules adopted by the Board of Directors will bind the Corporation and all recipients of Options pursuant to this Plan. This Plan will inure to the benefit of and be binding upon the Corporation, its employees, and their respective successors, heirs and assigns.

28. Withholding and Taxes. To the extent that the Corporation is required to withhold federal, state, local or foreign taxes in connection with any payment made or benefit realized by a Participant or other person under this Plan, and the amounts available to the Corporation for the withholding are insufficient, it shall be a condition to the receipt of any such payment or the realization of any such benefit that the Participant or such other person make arrangements satisfactory to the Corporation for payment of the balance of any taxes required to be withheld. The Corporation shall not be responsible for payment by any Participant of the proper amount of taxes relating to the grant or exercise of Options. The Corporation intends, but is not required to ensure, that Options issued under the Plan are exempt from or in compliance in all respects with Section 409A of the Code and shall interpret and administer the Options in accordance with such intention. Notwithstanding any provision to the contrary, all liability associated with participation in the Plan, including, without limitation, any liabilities imposed under Section 409A of the Code, shall be borne by the Participant.

29. Certain Terminations of Employment or Consulting Services, Hardships and Approved Leaves of Absence. Notwithstanding any other provision of this Plan to the contrary, in the event of a Termination by reason of death, disability, normal retirement, early retirement, with the consent of the Corporation, termination of employment or consulting services, as applicable, to enter public service with the consent of the Corporation or leave of absence approved by the Corporation, or in the event of hardship or other special circumstances, of a Participant who holds an Option that is not immediately and fully exercisable, the Board of Directors may take any action that it deems to be equitable under the circumstances or in the best interests of the Corporation, including without limitation, waiving or modifying any limitation or requirement with respect to any Option under this Plan.

30. Use of Proceeds. Any cash proceeds received by the Corporation from the sale of Common Stock under the Plan shall be used for any corporate purpose.

Exagen Corporation
2013 Stock Option Plan
Appendix
Regarding Plan Amendments

	Date of Board Approval	Date of Shareholder Approval
Initial adoption of plan (1,708,080 shares)	December 13, 2012	December 13, 2012
Increase of share reserve (17,835,798 shares)	May 27, 2014	May 27, 2014
Clarification of share reserve (8,893,246 shares)	May 29, 2014	N/A
Increase of share reserve (123,000,000 shares)	October 5, 2018	October 5, 2018

EXAGEN DIAGNOSTICS, INC.

STOCK OPTION PLAN
STOCK OPTION AGREEMENT # [ ]

This Stock Option Agreement ("Agreement") is made and entered into effective as of the Date of Grant set forth below (the "Date of Grant") by and between Exagen Diagnostics, Inc., a Delaware corporation (the "Company"), and the participant named below ("Participant") pursuant to the Company's Stock Option Plan (the "Plan"). Capitalized terms not defined herein will have the meaning ascribed to such terms in the Plan.

Participant: _____
Social Security Number: _____
Address: _____
_____
Total Option Shares: _____
Exercise Price Per Share: _____
Date of Grant: _____
Vesting Dates: _____
_____
_____
Expiration Date: _____
Type of Stock Option
(*Check one*): **[ ] Incentive Stock Option**
[ ] Nonqualified Stock Option

1. Grant of Option. The Company hereby grants to Participant an option (the "Option") to purchase the total number of shares of Common Stock ($.001 par value per share) of the Company set forth above (the "Shares") at the Exercise Price Per Share set forth above (the "Exercise Price"), subject to all of the terms and conditions of this Agreement and the Plan. In consideration of and as a precondition to the grant of the Option, Participant, on behalf of Participant and all persons or parties claiming through the Participant, including any successor or assign, as of the date hereof forever waives, releases, discharges and covenants not to sue the Company or its successors, assigns, shareholders, affiliates, partners, officers, directors, employees, agents, attorneys, accountants, and representatives from or on any and all past, present, or future claims, demands, causes of action, suits, damages, costs, expenses, losses, liabilities or obligations, whatsoever, whether at law or equity, know or unknown, arising directly or indirectly from or in connection with any stock option previously granted to Participant by the Company.

2. Exercise Period.

2.1 Exercise Period of Option. As stated pursuant to the vesting dates above.

2.2 Vesting of Options. Shares that are vested pursuant to the schedule set forth in Section 2.1 hereof are "Vested Shares". Shares that are not vested pursuant to the schedule set forth in Section 2.1 hereof are "Unvested Shares".

2.3 Expiration. These Options will expire on the Expiration Date set forth above and must be exercised, if at all, on or before the Expiration Date.

3. Termination. If Participant is terminated for Cause, then this Option will expire on Participant's Termination Date, or at such later time and on such conditions as determined by the Board of Directors. In the event of termination for any other reason, this Option will be exercisable, as to Vested Shares, in accordance with the terms of the Plan.

4. Non-transferability of Option. This Option may not be transferred in any manner other than by will or the laws of descent and distribution and, during the Participant's lifetime, may be exercised only by Participant. The terms of this Option will be binding upon the successors and assigns of Participant.

5. Tax Consequences. Set forth below is a brief summary as of the Effective Date of the Plan of some of the tax consequences of exercise of this Option and disposition of the Shares. THIS SUMMARY IS NECESSARILY INCOMPLETE, AND THE TAX LAWS AND REGULATIONS ARE SUBJECT TO CHANGE. PARTICIPANT SHOULD CONSULT A TAX ADVISER BEFORE EXERCISING THE OPTION OR DISPOSING OF THE SHARES.

5.1 Exercise of ISO. If this Option qualifies as an ISO, there will be no regular federal or state income tax liability upon the exercise of this Option, although the excess, if any, of the Fair Market Value of the Shares on the date of exercise over the Exercise Price will be treated as a tax preference item for federal income tax purposes and may subject the Participant to the alternative minimum tax in the year of exercise.

5.2 Exercise of Nonqualified Stock Option. If this Option does not qualify as an ISO, there may be a regular federal and state income tax liability upon the exercise of this Option. Participant will be treated as having received compensation income (taxable at ordinary income tax rates) equal to the excess, if any, of the Fair Market Value of the Shares on the date of exercise over the Exercise Price. If Participant is or was an employee of the Company, the Company will be required to withhold from Participant's compensation or collect from Participant and pay to the applicable taxing authorities an amount equal to a percentage of this compensation income at the time of exercise.

6. Governing Plan Document. The Option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of the Option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. In the event of any conflict between the provisions of the Option and those of the Plan, the provisions of the Plan shall control.

7. Entire Agreement. The Plan is incorporated herein by reference. A copy of the Plan may be obtained from the Corporation. This Agreement and the Plan constitute the entire agreement of the parties and supersede all prior undertakings and agreements with respect to the subject matter hereof.

8. Acceptance. Participant hereby acknowledges receipt of a copy of the Plan and this Agreement. Participant has read and understands the terms and provisions thereof, and accepts this Option subject to all the terms and conditions of the Plan and this Agreement. Participant acknowledges that there may be adverse tax consequences upon exercise of this Option or disposition of the Shares and that Participant should consult a tax adviser prior to such exercise or disposition.

EXAGEN DIAGNOSTICS, INC:

By: _____
Name: _____
Title: _____

PARTICIPANT:

By: _____
Name _____

Exhibit 10.5

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

LICENSE AGREEMENT

THIS LICENSE AGREEMENT the "*Agreement*") is entered into as of September 13, 2007 ("*Effective Date*") by and between Prometheus Laboratories Inc., a California corporation, having a principal place of business at 9410 Carroll Park Drive, San Diego, California 92121, and its Affiliates ("*Prometheus*"), and Proprius, Inc., a Delaware corporation, having a principal place of business at 12264 El Camino Real, Suite 350, San Diego, California 92130, and its Affiliates ("*Proprius*").

BACKGROUND

WHEREAS, Prometheus has developed Patent Rights and Prometheus Know-how (each as defined below) relating to methotrexate metabolites and pharmacogenetics;

WHEREAS, Proprius has expertise regarding research and development, clinical development, marketing and sale of therapeutics and diagnostics in rheumatologic and autoimmune diseases; and

WHEREAS, Prometheus desires to grant Proprius a license on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the recitals and the mutual covenants and obligations contained herein, Prometheus and Proprius agree as follows:

1. DEFINITIONS

1.1 "Affiliate" of an entity shall mean any entity that controls, is controlled by, or is under common control with such entity. An entity shall be deemed to be in control of another entity if it owns or controls, directly or indirectly, more than fifty percent (50%) of the outstanding voting equity of the other entity (or other equity or ownership voting interest in the event that such entity is other than a corporation).

1.2 "Confidential Information" shall mean all written information and data provided by one Party to the other hereunder and marked "Confidential" or a reasonable equivalent thereof or, if disclosed orally, visually or in some other form, is summarized in a writing identified as "Confidential" or a reasonable equivalent thereof and provided to the other Party within thirty (30) days of such disclosure; *provided, however,* that during the term of this Agreement, the Prometheus Know-how shall be deemed the Confidential Information of both Parties. Notwithstanding the foregoing, Confidential Information of a Party shall not include information that the other Party (the "recipient") can demonstrate:

(a) is known to the recipient and not subject to prior confidentiality obligations to Prometheus (i.e., knowledge of former Prometheus employees), as evidenced by its written records, before receipt thereof under this Agreement;

(b) is disclosed to the recipient without restriction after acceptance of this Agreement by a Third Party who has the right to make such disclosure;

(c) is or becomes part of the public domain through no breach of this Agreement; or

(d) is independently developed, as evidenced by its written records, by or for the recipient by individuals or entities who have not had access to the information disclosed hereunder.

1.3 “Contract Quarter” shall mean a period of three (3) consecutive months ending on March 31, June 30, September 30 or December 31; provided, however, that each of the first and last Contract Quarters during the term of this Agreement may be less than three (3) full consecutive months.

1.4 “Contract Year” shall mean a period of four (4) consecutive Contract Quarters ending on December 31 of any calendar year; provided, however, that the first and last Contract Years during the term of this Agreement may be less than four (4) consecutive Contract Quarters in that the first Contract Year shall begin on the Effective Date, and the last Contract Year shall end upon termination or expiration of this Agreement in accordance with Article 10.

1.5 “FDA” shall mean the United States Food and Drug Administration or its successor entity.

1.6 “Inventors” shall mean the inventors named in the patents and patent applications listed in Exhibit 1.9 hereto.

1.7 “Licensed Product” shall mean any product, product part or service which is made, used, distributed or sold and which, but for the licenses granted in Article 2 of this Agreement, would infringe a Valid Claim in the Patent Rights, in a country in which it is made, used, distributed, sold or imported.

1.8 “Net Sales” shall mean the gross invoiced price of Licensed Products sold to a Third Party (other than a Sublicensee, unless such Sublicensee is the end user of such Licensed Products), less the following: (a) credits, allowances, discounts, rebates and chargebacks provided to a Third Party; (b) freight, postage, transportation and insurance costs incurred in delivering Licensed Products (only to the extent such costs are included in such gross invoiced price); (c) cash, quantity and trade discounts actually given to Third Parties; (d) rebates and administrative fees actually paid to group purchasing organizations; (e) sales, use, value-added, excise and other similar taxes to the extent included in such gross invoiced price; and (f) custom duties, surcharges and other governmental charges incurred in connection with the exportation or importation of Licensed Products to the extent such amounts are included in such gross invoiced price. All such amounts set forth above shall be determined in accordance with generally accepted accounting principles (“GAAP”).

Notwithstanding the foregoing, if a Licensed Product is sold or provided as part of a system, package, or combination product or service that contains one or more components that could be sold separately (a “Combination Product”), Net Sales of a Combination Product will be calculated by multiplying the Net Sales from the sale of such Combination Product (determined in accordance with the preceding paragraph) by the fraction *A/B* where “A” is the fair market value of the Licensed Product when supplied or priced separately from the other components of the Combination Product, and “B” is the fair market value of the Combination Product. In the event that no market price is available for the Licensed Product when supplied or priced separately from the other components, fair market value shall be determined in good faith by Proprius and Prometheus taking into account, among other factors as the parties may deem relevant, the number of components in such Combination Product.

For purposes of this Section 1.8, fair market value shall mean the gross sales price to a Third Party in an arm’s-length sale or exchange of consideration for an identical item or service sold or provided in the same quantity and at the same time and place as the sale or exchange for which such gross sales price or value is to be determined.

1.9 “Patent Rights” shall mean the patents and the patent applications listed in Exhibit 1.9, and all provisionals, substitutions, extensions, re-examinations, reissues, renewals, divisions,

continuations, improvements or continuations-in-part therefor or thereof, and all patents claiming priority to any such patents or patent applications to the extent owned or controlled by Prometheus and all foreign counterparts of the foregoing.

1.10 “Party” shall mean either Prometheus or Proprius and “Parties” shall mean both Prometheus and Proprius.

1.11 “Prometheus Know-how” shall mean all non-patented and unpublished documentation, information and data relating solely to the development of products based solely on the Patent Rights owned or controlled by Prometheus, as of the Effective Date. Prometheus Know-how shall only include research, clinical and manufacturing data and documentation, sample report forms from the clinical studies, case report forms, clinical databases, protocols and completed patient informed consent forms, copies of research notebooks standard operating procedures and laboratory procedures, New York State validation reports, raw clinical data files, marketing materials, clinical experience program data, and animation files, draft sales aids or other promotional material, and market research; all to be provided “as is” without any representation or warranty regarding accuracy or completeness or compliance with laws, regulations or guidance documents and the extent available and transferable.

1.12 “Reasonable Commercial Efforts” shall mean a level of effort by a Party [***].

1.13 “Regulatory Authority” or “Regulatory Authorities” shall mean any federal, state, local or international regulatory agency, department, bureau or other governmental entity, including, but not limited to, the FDA, which is responsible for issuing approvals, licenses, registrations or authorizations necessary for the manufacture, use, storage, import, transport or sale of Licensed Products in a regulatory jurisdiction.

1.14 “Samples” shall mean, to the extent in the possession and control of Prometheus as of the Effective Date, all serum specimens, plasma specimens, blood specimens, red blood cells, leukocytes, DNA or RNA material and lymphoblastoid cells generated from patients and/or healthy human subjects, used by the Inventors in their discovery of, and other research on, the development of products based solely on the Patent Rights.

1.15 “Sublicensee” shall mean a Third Party to which Proprius, its Affiliate or Sublicensee grants a sublicense of its rights under this Agreement.

1.16 “Sublicensee Royalties” shall mean [***]

1.17 “Sublicense Fees” shall mean [***]

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.18 “Territory” shall mean the entire world.

1.19 “Third Party” shall mean a natural person, corporation, partnership, joint venture, trust, any governmental authority or other business entity or organization, and any other recognized organization other than the Parties and/or their Affiliates.

1.20 “Trademarks” shall mean “Trexscore” and “Veritrex”.

1.21 “Valid Claim” shall mean a claim of (a) an issued or granted and unexpired patent included in Patent Rights, which claim has not been held invalid or unenforceable by a court or agency of competent jurisdiction from which no further appeal can be taken, or which has not been admitted by the patentee to be invalid or unenforceable; or (b) a pending patent application included in the Patent Rights, so long as such application is being prosecuted and the claim in question has not been abandoned by the owner of the application and provided that such patent application has not been pending for more than [***] from the earliest filing date from which such claim takes priority in the country in question.

2. RIGHTS GRANTED/MATERIAL TRANSFER

2.1 License to Patent Rights and Prometheus Know-how. Subject to the terms and conditions of this Agreement, Prometheus hereby grants to Proprius an exclusive (even as to Prometheus) royalty-bearing right and license under the Patent Rights and Prometheus Know-how, with the right to further sublicense in accordance with this Agreement, to commercialize, develop, research, use, make, have made, sell, offer for sale, have sold and import Licensed Products in the Territory. Provided, however that such right and license shall not include the right to promote any Licensed Products to gastroenterologists or to directly or indirectly, participate in the development or commercialization of any Licensed Product for use in diagnosing or treating any gastrointestinal diseases. Proprius shall have the exclusive right (even as to Prometheus) to publicly disclose or use Prometheus Know-how in support of Proprius’ and its Sublicensees’ development and commercialization efforts related to Licensed Products.

2.2 Sublicensing. [***] agrees that any agreement for the sublicense of any rights granted to it under this Article 2 [***] shall promptly provide [***] with a copy of each sublicense granted hereunder. In any event, [***] shall remain responsible for all obligations under this Agreement following any sublicense of the rights granted under this Article 2.

2.3 Material Transfer by Prometheus. Within ninety (90) days of the Effective Date and subject to receipt of any necessary Third Party approvals or consents (which Prometheus does not guaranty or warrant will be obtainable), Prometheus shall provide to Proprius the Samples for use by Proprius solely for technology validation and development purposes with respect to Licensed Products in the Territory. Except as otherwise provided under this Agreement, all Samples will remain the sole

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property of Prometheus, will be used only by Proprius and its Sublicensees in furtherance of the development and commercialization of Licensed Products, and only in a manner consistent with the protocol originally submitted to, and approved by, the respective IRBs of the institutions through which the Samples were collected. Prometheus shall provide to Proprius true and complete copies of each such protocol and a description of the Samples to which such protocol applies. The Samples supplied under this Section 2.3 must be used with prudence and appropriate caution in any experimental work, because not all of their characteristics may be known. THE SAMPLES ARE PROVIDED "AS IS" AND WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY WARRANTY THAT THE USE OF THE SAMPLES WILL NOT INFRINGE OR VIOLATE ANY PATENT OR OTHER PROPRIETARY RIGHTS OF ANY THIRD PARTY. NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, PROMETHEUS SHALL HAVE NO LIABILITY (INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT, CONSEQUENTIAL OR EXEMPLARY) TO PROPRIUS RELATING TO THE SAMPLES REGARDLESS OF ANY NOTICE OF THE POSSIBILITY OF SUCH LIABILITY OR DAMAGES.

2.4 No Implied Rights. Proprius shall have no licenses or other rights other than those expressly granted in this Agreement, and, in particular and without limiting the foregoing, nothing in this Agreement shall be construed to grant Proprius any licenses or other rights in any intellectual property rights, information or data owned or controlled by Prometheus or any of its Affiliates, except as expressly set forth in this Agreement.

2.5 Restrictions on Development and Commercialization of Licensed Products. Notwithstanding any other provision of this Agreement, during the term of this Agreement, Proprius (and its Affiliates and Sublicensees) agrees that it will not, directly or indirectly, market or promote the Licensed Products to gastroenterologists nor will it (or any of its Affiliates or Sublicensees), directly or indirectly, participate in the development or commercialization of any Licensed Product for use in diagnosing or treating any gastrointestinal diseases.

2.6 Right of First Negotiation. If, during the two (2) year period beginning on the First Commercial Sale of a Licensed Product by Proprius, (i) Proprius desires to divest or sublicense all or substantially all of its business relating to the Licensed Products (whether by sale, license or otherwise) to a Third Party, or (ii) a Third Party initiates such discussions with Proprius and Proprius is interested in entertaining such discussions (both (1) and (ii) are collectively referred to as a "*Business Opportunity*"), then Proprius will promptly notify Prometheus in writing thereof, with such notice containing a reasonably complete summary of reasonably available information necessary to evaluate the Business Opportunity; provided, however, that Proprius shall not be obligated to disclose to Prometheus the identity of any such Third Party, the terms proposed by such Third Party (if confidential) or any other confidential or proprietary information of such Third Party. If Prometheus indicates interest in pursuing the Business Opportunity within [***] business days of Prometheus' receipt of Proprius' written notice, the Parties will negotiate in good faith to enter into a definitive agreement. If the Parties are unable to enter into a definitive agreement within [***] days after Proprius' receipt of Prometheus' indication of interest, or if Prometheus does not so indicate an interest in pursuing the Business Opportunity within the [***] business day period, Proprius will be free to execute such Business Opportunity with a Third Party provided that Proprius shall not offer the Business Opportunity to a Third Party on terms more favorable then those offered to Prometheus or on terms worth less to Proprius then those offered by Prometheus for the Business Opportunity. In no event shall Proprius be obligated to enter into any such transaction with Prometheus. Notwithstanding anything in this Agreement to the contrary, any Business Opportunity entered into by Proprius with a Third Party will be subject to Prometheus' rights under this Agreement, including, without limitation, Prometheus' right to receive the payments set forth in Article 5.

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

3. LICENSED PRODUCT DEVELOPMENT AND COMMERCIALIZATION

3.1 Development and Clinical Testing Activities. Proprius shall use Reasonable Commercial Efforts to undertake development activities for the Licensed Product, including, but not limited to, conducting or having conducted, and completing or having completed, all clinical studies and other activities required for approvals from the applicable Regulatory Authorities. Proprius shall bear the costs and expenses related to the development of the Licensed Products.

3.2 Regulatory Approvals. Proprius shall use Reasonable Commercial Efforts to submit to and obtain acceptance from the applicable Regulatory Authorities of the appropriate regulatory filing for one or more Licensed Products in the Territory. In addition, and without limiting the generality of the foregoing, Proprius by either Proprius, an Affiliate or a Sublicensee shall use its Reasonable Commercial Efforts to achieve the first commercial sale of a Licensed Product in the Territory *(*"*First Commercial Sale*") on or before December 31, 2008. Proprius shall bear the costs and expenses related to the obtaining of the appropriate regulatory approvals for the Licensed Products.

3.3 Remedies for Failure to use Reasonable Commercial Efforts to Achieve First Commercial Sale. In the event Proprius does not achieve the First Commercial Sale on or before December 31, 2008, the Parties shall discuss in good faith whether a modification of such obligation, including the date, is appropriate. Except as otherwise agreed to by the Parties pursuant to this Section 3.3, if Proprius' failure to achieve the First Commercial Sale continues through March, 31, 2009, then Prometheus shall have the right to terminate this Agreement by written notice thereof to Proprius, as further set forth in Section 10.2.

3.4 Licensed Product Development and Marketing. Proprius shall use Reasonable Commercial Efforts, by itself, an Affiliate or through a Sublicensee, to develop Licensed Products in the United States and in such other regions in the Territory as Proprius deems commercially reasonable, and to market and sell Licensed Products in all regions in the Territory where appropriate regulatory and marketing approvals have been obtained from the applicable Regulatory Authorities. Proprius, at Proprius' own expense, or as applicable, a Sublicensee, at its own expense, shall be responsible for all development and commercial activities related to undertaking the obligations pursuant to this Section 3.4.

3.5 Trademark License: Labeling. All packaging for Licensed Products shall display Proprius' trade dress and a trademark suitable to Proprius which may, but need not, be a Trademark, at Proprius' sole discretion. Prometheus hereby grants to Proprius a royalty-free license to use the Trademarks in connection with the commercialization of Licensed Products in the Territory. All packaging and labeling for Licensed Products shall include all appropriate trademark and patent markings in order to reasonably protect such Trademarks and Patent Rights. Proprius acknowledges Prometheus' exclusive right, title and interest in and to the Trademarks and acknowledges that nothing herein will be construed to grant to Proprius any rights in such Trademarks except as expressly provided herein. Proprius further acknowledges that its use of the Trademarks will not create in Proprius any right, title or interest in the Trademarks, and that all use of the Trademarks and the goodwill generated thereby will inure solely to the benefit of Prometheus. Proprius shall make only claims, representations or warranties directly or indirectly to any Third Party about the Licensed Product that are consistent with the Licensed Product's approval from applicable Regulatory Authorities and other scientific literature. During the Term of this Agreement, Proprius shall be solely responsible for maintaining the Trademarks, including all costs and expenses relating thereto.

3.6 Customer Service and Technical Support. Proprius, at Proprius' own expense, or as applicable, a Sublicensee, at its own expense, shall be responsible for and use Reasonable Commercial Efforts in providing training, customer service and technical support for Licensed Products.

3.7 Export Control Laws. Proprius shall comply with all applicable export laws, restrictions and regulations of the Department of Commerce or other United States or foreign agency or authority, and shall not export, or allow any export or re-export of any Confidential Information or Licensed Products in violation of any such restrictions, laws or regulations.

3.8 Progress Reports. Once every six (6) months prior to the date of the First Commercial Sale and once every Calendar Year, thereafter, Proprius will submit to Prometheus a progress report covering in reasonable detail (i) activities by Proprius related to the development and testing of Licensed Product (or the commercialization of Licensed Products after development), and (ii) the obtaining of regulatory approvals necessary for marketing Licensed Product.

4. REGULATORY COMPLIANCE MATTERS AND COMPLAINTS

4.1 Regulatory Matters. In addition to the obligations set forth in Article 3 of this Agreement, Proprius, at Proprius' own expense, or as applicable, a Sublicensee, at its own expense, shall be responsible for and take all appropriate corrective or other actions regarding all regulatory matters related to the Licensed Products and the Trademarks in the Territory, including responses to inquiries from Regulatory Authorities in accordance with all applicable laws.

4.2 Complaints and Recalls.

(a) Licensed Product Complaints. Proprius, at Proprius' own expense, or as applicable, a Sublicensee at its own expense, shall investigate, respond to and take all appropriate corrective or other actions regarding all complaints associated with the manufacture and/or distribution of Licensed Products which are made, used, distributed or sold by or on behalf of Proprius or any of its Sublicensees in accordance with all applicable laws.

(b) Licensed Product Recalls. Proprius, at Proprius' own expense, or as applicable, a Sublicensee at its own expense, and, subject to an order or directive from a Regulatory Authority, shall be responsible to conduct and to pay for the costs of any recall or withdrawal of Licensed Products made, used, distributed or sold by or on behalf of Proprius or any of its Sublicensees in accordance with all applicable laws. Promptly, in accordance with all applicable laws and if possible, prior to making such recall, Proprius shall advise Prometheus of the situation and any facts relating to the advisability of the recall, destruction or withholding from the market of the Licensed Product in the Territory.

4.3 Record keeping. Proprius (and its Affiliates and Sublicensees) shall keep records of its sales and customers and other records sufficient to adequately administer a recall of each such Licensed Product and reasonably cooperate in any decision to recall, retrieve and/or replace any Licensed Product, in accordance with all applicable laws and regulatory requirements.

4.4 Fines and Penalties. Any fines and/or penalties for failure by Proprius to comply with any requirement or regulation shall be the sole responsibility of Proprius.

5. PAYMENTS

5.1 Up Front Fee. Within sixty (60) days after the Effective Date, Proprius shall make a nonrefundable up front payment to Prometheus of [***] U.S. Dollars (U.S.$[***]) (the "*Up Front Fee*").

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5.2 Preferred Stock. Within 30 days after the Effective Date, Proprius shall deliver to Prometheus a certificate for 200,000 shares of Proprius Series A Preferred Stock, $0.0001 par value per share *("Series A Preferred Stock"),* registered in the name of Prometheus. In regard to the Preferred Stock, Proprius hereby represents and warrants as follows:

(a) Proprius has duly authorized the issuance of 38,000,000 shares of its Preferred Stock, having the rights, restrictions, privileges and preferences set forth in the Certificate of Amendment attached hereto as Exhibit 5.2 (the "*Certificate of Amendment*"*)* and Proprius has adopted and filed the Certificate of Amendment with the Secretary of State of the State of Delaware.

(b) The authorized capital stock of Proprius (immediately prior to the issuance of the Preferred Stock to Prometheus) consists of 32,000,000 shares of common stock, $0.0001 par value per share (the "*Common Stock*"*),* of which 3,004,166 shares are issued and outstanding and 1,170,834 shares have been reserved for issuance pursuant to subscription, warrant, option, convertible security or other right (contingent or otherwise), and 38,000,000 shares of preferred stock *("Preferred Stock"),* of which 21,000,000 shares have been designated as Series A Preferred Stock of which 6,105,406 are issued and outstanding. No other shares or series of capital has been designated or is issued or outstanding. All of the issued and outstanding shares of Common Stock and Preferred Stock have been duly authorized and validly issued and are fully paid and nonassessable. Except for the Preferred Stock and as provided in this Agreement, (i) no subscription, warrant, option, convertible security or other right (contingent or otherwise) to purchase or acquire any shares of capital stock of the Company is authorized or outstanding, (ii) Proprius has no obligation (contingent or otherwise) to issue any subscription, warrant, option, convertible security or other such right or to issue or distribute to holders of any shares of its capital stock any evidences of indebtedness or assets of the Company, (iii) Proprius has no obligation (contingent or otherwise) to purchase, redeem or otherwise acquire any shares of its capital stock or any interest therein or to pay any dividend or make any other distribution in respect thereof, and (iv) there are no outstanding or authorized stock appreciation, phantom stock or similar rights with respect to Proprius. All of the issued and outstanding shares of capital stock of Proprius have been offered, issued and sold by Proprius in compliance with applicable federal and state securities laws.

(c) The issuance and delivery of the shares of Series A Preferred Stock in accordance with this Agreement, and the issuance and delivery of the shares of Common Stock issuable upon conversion of the Preferred Stock, have been duly authorized by all necessary corporate action on the part of Proprius, and all such shares have been duly reserved for issuance. The shares of Series A Preferred Stock when so issued and delivered pursuant to this Agreement, and the shares of Common Stock issuable upon conversion of the Preferred Stock, when issued upon such conversion, will be duly and validly issued, fully paid and non-assessable.

In regard to the issuance of the shares of the Series A Preferred Stock to Prometheus, Prometheus hereby represents and warrants that Prometheus is acquiring the Series A Preferred Stock, and the shares of Common Stock into which the Series A Preferred Stock may be converted, for its own account for investment and not with any present intention of distributing or selling the same, and Prometheus has no present or contemplated agreement, undertaking, arrangement, obligation, indebtedness or commitment providing for the disposition thereof. Prometheus is an "accredited investor" as defined in Rule 501(a) under the Securities Act.

5.3 Milestone Payments. In addition to the payments described in Sections 5.1 and 5.4 of this Agreement, Proprius shall make the following one-time cash milestone payments to Prometheus within ninety (90) days of the occurrence of the applicable event:

MILESTONE EVENT	PAYMENT
First Commercial Sale by Proprius, its Affiliates or Sublicensees	U.S.$[***]
Achievement of greater than or equal to U.S.$[***] in cumulative Net Sales of all Licensed Products (determined in the aggregate for sales by Proprius, its Affiliates and Sublicensees)	U.S.$[***]
Achievement of greater than or equal to U.S.$[***] in cumulative Net Sales of all Licensed Products (determined in the aggregate for sales by Proprius, its Affiliates and Sublicensees)	U.S.$[***]
Achievement of greater than or equal to U.S.$[***] in cumulative Net Sales of all Licensed Products (determined in the aggregate for sales by Proprius, its Affiliates and Sublicensees)	U.S.$[***]
Achievement of greater than or equal to U.S.$[***] in cumulative Net Sales of all Licensed Products (determined in the aggregate for sales by Proprius, its Affiliates and Sublicensees)	U.S.$[***]

Notwithstanding the foregoing, Proprius shall not be obligated to make payments under this Section 5.3 which total more than [***] U.S. Dollars (U.S.$[***]) in any calendar year (the "*Milestone Payment Cap*"). Any amounts in excess of the Milestone Payment Cap for any calendar year shall be carried forward and paid on March 31 of the next calendar year (subject again, in such calendar year, to the Milestone Payment Cap).

5.4 Royalty Payments to Prometheus. In partial consideration of the license rights granted to Proprius hereunder, Proprius shall pay to Prometheus royalties based on Net Sales of Licensed Products by Proprius and its Affiliates (but not Sublicensees provided that Sublicensees shall be included if Proprius has sublicensed its rights hereunder without having devoted material efforts to the development of Licensed Products and without retaining material development and/or commercialization rights related to the Licensed Products), in countries where a Valid Claim of the Patent Rights covering such Licensed Products exists at the rate of [***] percent ([***]%).

Subject to the termination provisions of Article 10 of this Agreement, Proprius' obligation to pay royalties to Prometheus on Licensed Products covered by a Valid Claim of the Patent Rights in each country shall expire on the date when the last patent containing a Valid Claim in such country expires, lapses or is invalidated.

5.5 Sublicense Fees and Sublicensee Royalties. In addition to the royalties and milestones payable pursuant to Sections 5.3 and 5.4 of this Agreement, Proprius shall pay to Prometheus the following amounts:

(a) If the Sublicensee is [***] or any successor organization to [***] (hereinafter "[***]" shall include such successor organizations), then Proprius shall pay to Prometheus:

(i) [***] percent ([***]%) of any Sublicensee Royalties received by Proprius from [***] or any of its Affiliates or Sublicensees, provided however, that under no circumstances shall such payment to Prometheus by Proprius under this Section 5.5(a)(i) be less then [***] percent ([***]%) of the Net Sales of [***] and its Affiliates or Sublicensees nor shall it be more then [***] percent ([***]%) of the Net Sales of [***] and its Affiliates or Sublicensees; plus

(ii) [***] percent ([***]%) of Sublicense Fees received by Proprius from [***] or any of its Affiliates or Sublicensees.

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(b) In the case of any other Sublicensee:

(i) [***] percent ([***]%) of any Sublicensee Royalties received by Proprius from such Sublicensee or any of its Affiliates or Sublicensees, provided however, that under no circumstances shall such payment to Prometheus by Proprius under this Section 5.5(b)(i) be less then [***] percent ([***]%) of the Net Sales of such Sublicensee and its Affiliates or Sublicensees nor shall it be more then [***] percent ([***]%) of the Net Sales of such Sublicensee and its Affiliates or Sublicensees; plus

(ii) [***] percent ([***]%) of Sublicense Fees received by Proprius from such Sublicensee or any of its Affiliates or Sublicensees.

For the avoidance of doubt, except as specifically set forth above relating to [***] under Section 5.5 (a), in the event that Proprius sublicenses any or all of its rights to any other third party without having devoted material efforts to the development of Licensed Products and without retaining material development and/or commercialization rights related to the Licensed Products, Proprius shall pay to Prometheus a royalty pursuant to Section 5.4 (and not Section 5.5(b)) based upon the Net Sales of any Sublicensee's (or its Affiliates).

5.6 Royalty Reduction. Any royalty payable to Prometheus under Section 5.4 of this Agreement may be reduced up to a maximum of [***] percent ([***]%) of the royalty otherwise due on a Calendar Quarter basis for any and all royalties to the extent, and only to the extent, it is reasonable and necessary for Proprius to pay such royalties to a Third Party in order to manufacture, use or sell a Licensed Product (up to the actual extent of the royalties paid to such Third Party) under a license of intellectual property rights entered into by Proprius with respect to the Licensed Product, provided that under no circumstances shall the royalty rate payable to Prometheus hereunder be reduced below two and one-half percent (2½%).

5.7 Terms of Payment.

(a) Within [***] days following the end of each Contract Quarter during the Term, Proprius shall make the payments to Prometheus set forth in Sections 5.4 of this Agreement based on Net Sales during the previous Contract Quarter. Royalty payments due to Prometheus under Section 5.5 shall be due within [***] days following the end of each Contract Quarter during the Term as well.

(b) With each quarterly payment made under this Section 5.7, Proprius shall deliver to Prometheus a full and accurate accounting of all Net Sales by Proprius, and its Affiliates and Sublicensees as well as all Sublicense Fees and Sublicensee Royalties received from Sublicensees and their Affiliates, if any, for the relevant Contract Quarter. Each such report shall include at least the following information: (i) quantity of each Licensed Product sold by Proprius, and its Affiliates and Sublicensees on a country-by-country basis; (ii) gross sales of Licensed Products by Proprius, and its Affiliates and Sublicensees on country-by-country basis; (iii) any deductions from gross sales used to arrive at Net Sales; (iv) the quantity and type of Sublicense Fees and Sublicensee Royalties received from Sublicensees and their Affiliates; and (v) Proprius' computation of the aggregate earned royalties payable to Prometheus under Sections 5.4 and 5.5, respectively.

(c) Within [***] calendar days of the end of each Calendar Quarter, Proprius shall provide Prometheus with its best estimate of all the payments due to Prometheus hereunder for such prior Calendar Quarter from Proprius, its affiliates and its Sublicensees.

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(d) All royalty and milestone and Sublicense Royalties and Sublicense Fee payments due Prometheus shall be made in United States dollars by wire transfer to a bank and account specified by Prometheus in writing. For sales made or Sublicense Fees or Sublicensee Royalties received in currency other than United States dollars, amounts payable under this Agreement shall be converted to United States dollars as would be required for reporting under GAAP. In no event shall the applicable royalties exceed the maximum amount payable under the applicable laws, regulations or administrative rulings of the territory or country which restricts the royalty rate or amount payable on Net Sales in such territory or country.

5.8 Taxation of Royalties. Where any sum due to be paid to Prometheus hereunder is subject to any withholding or similar tax, the Parties shall use reasonable efforts to do all such acts and things and to sign all such documents as will enable them to take advantage of any applicable double taxation agreement or treaty or appeal procedure. In the event there is no applicable double taxation agreement or treaty, or appeal procedure, or if any appeal procedure has been exhausted or if an applicable double taxation agreement or treaty or appeal procedure reduces but does not eliminate such withholding or similar tax, notwithstanding any pending appeal, Proprius shall pay such withholding or similar tax to the appropriate government authority as may be required, deduct the amount paid from the amount due Prometheus and secure and send to Prometheus reasonable evidence of such payment.

5.9 Restrictions on Remittance. If, at any time, legal restrictions prevent the prompt remittance of part or all royalties with respect to any country where Licensed Products are sold, Proprius shall have the right to make such payments by depositing the amount thereof in local currency to Prometheus' account in a bank or other depository institution in such country.

5.10 Late Payments. Any payment, including without limitation, royalty, Sublicense Fees, Sublicensee Royalties, and milestone payments, made by Proprius under this Agreement after the date such payment is due shall bear interest at the lesser of 1 1/2% per month and the maximum rate permitted by applicable law.

6. BOOKS AND RECORDS

6.1 Procedures. Proprius shall keep full and accurate accounting records of Net Sales, Sublicense Fees and Sublicensee Royalties in sufficient detail to determine the amounts payable to Prometheus under Sections 5.3, 5.4 and 5.5. Such records, together with all necessary supporting data, shall be kept at Proprius' offices at the address set forth above or such other address as Proprius may indicate in writing to Prometheus. Upon reasonable notice to Proprius, Prometheus shall have the right during normal business hours to have an independent certified public accounting firm to audit on a confidential basis Proprius' financial records pertaining to Net Sales, Sublicense Fees and Sublicensee Royalties to verify the amounts payable pursuant to this Agreement; provided, however, that such audit shall neither (a) take place more frequently than once in a Contract Year, nor (b) cover records for more than the preceding three (3) Contract Years, nor (c) cover any Contract Year that was previously audited pursuant to this Section 6.1. The accounting firm will disclose to Prometheus only whether the amounts reported by Proprius are correct or incorrect and the specific details concerning any discrepancies. An adjustment in payment shall be made within five (5) business days of demonstration of any underpayment or overpayment. Any underpayment shall include interest as specified in Section 5.10.

6.2 Cost of Audits. The fees and expenses of an audit requested by Prometheus pursuant to Section 6.1 of this Agreement shall be borne by Prometheus; provided, however, that if any audit reveals that Proprius underpaid the royalties, milestone payments, Sublicense Fees or Sublicensee Royalties due under this Agreement as to the period being audited by more than ten percent (10%) of the

amount that was payable for such period, then Proprius shall, in addition to paying any such deficiency, reimburse Prometheus for the cost of such audit.

6.3 Period to be Kept. Proprius shall retain all books and records it is required to maintain under Section 6.1 for [***] from the end of the Contract Year of the Net Sales (or Sublicense Fees or Sublicensee Royalties) to which the books and records pertain.

7. REPRESENTATIONS AND WARRANTIES

7.1 Mutual Warranties. Each of the Parties represents and warrants to the other Party as follows:

(a) It is duly organized and validly existing under the laws of its state of incorporation, and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof.

(b) It is duly authorized to execute and deliver this Agreement and to perform its obligations hereunder, and any person executing this Agreement on its behalf has been duly authorized to do so by all requisite corporate action.

(c) This Agreement is legally binding upon such Party and enforceable in accordance with its terms, subject to the effects of bankruptcy, insolvency or other laws of general application affecting the enforcement of creditor rights and judicial principles affecting the availability of specific performance and general principles of equity whether enforceability is considered a proceeding at law or equity. The execution, delivery and performance of this Agreement by it does not conflict with any material agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

(d) To the best of its knowledge, it has sufficient legal and/or beneficial title and ownership under its intellectual property rights necessary for it to fulfill its obligations under this Agreement.

7.2 Intellectual Property Warranties. As of the effective date, Prometheus represents and warrants to Proprius as follows:

(a) Prometheus is the sole and exclusive owner, with the right to license or sublicense, of all its right, title and interest in and to the Patent Rights with the right to license to Proprius;

(b) To the best of Prometheus' knowledge and belief without independent inquiry, the Patent Rights have not been obtained through any fraudulent activity or misrepresentation;

(c) There are no suits, claims or proceedings pending or, expressly threatened in writing, against Prometheus in any court or by or before any governmental body or agency with respect to the Patent Rights or the Prometheus Know-how or the making, having made, using, selling, offering for sale or importing Licensed Products;

(d) To the best of Prometheus' knowledge without independent inquiry, there are no suits pending or threatened that challenge the validity of any of the patents within Patent Rights, and Prometheus has no actual knowledge of any information or action that may jeopardize the validity, enforcement or ownership of the Patent Rights; and

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(e) Prometheus does not own, control or have rights to any patents or patent applications other than those licensed or sublicensed to Proprius according to the terms of this Agreement, having claims that would restrict Proprius' making, having made, using, selling, offering for sale or importing Licensed Products as such Licensed Products exist on the Effective Date.

7.3 Disclaimer. Except as expressly set forth in this Agreement, NEITHER PARTY MAKES ANY REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED. ALL OTHER REPRESENTATIONS OR WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING, WITHOUT LIMITATION, NONINFRINGEMENT, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

Without limiting the generality of the foregoing, and except as expressly set forth in this Agreement, Prometheus makes no (a) representation or warranty as to the validity of any patent or other intellectual property rights which are the subject of this Agreement, (b) representation or warranty that anything made, used, imported, offered for sale, sold or otherwise disposed of under any of the Patent Rights or the Prometheus Know-how is or will be free from infringement of patents or other intellectual property rights of Third Parties, or (c) grant, by implication, estoppel, or otherwise, of any license, option, covenant or right other than those which are expressly stated in this Agreement, including without limitation any license under any patent or patent application (or claim thereof) not within the Patent Rights.

8. PATENTS.

8.1 Prosecution of Patent Rights. Proprius, at Proprius' own expense, shall file, prosecute, issue and maintain all the Patent Rights. Proprius shaft provide Prometheus the right to review and comment on draft submissions to any patent office with respect to the Patent Rights reasonably in advance of any applicable due dates. Proprius shall consider in good faith the requests and suggestions of Prometheus with respect to strategies for filing and prosecuting the Patent Rights. In connection with Proprius' performance of its obligations under this Section 8.1, Proprius shall provide written notification to Prometheus of significant activities resulting from Proprius' actions under this Section 8.1 and shall provide Prometheus with reasonable access to and copies of the records related to such activities. Accordingly, Proprius shall provide Prometheus with copies of (a) all actions, notices and other correspondence received from the U.S. Patent and Trademark Office or any foreign equivalent, (b) responses and correspondence to the U.S. Patent and Trademark Office or any foreign equivalent, and (c) the original issued patent documents, certificates or equivalents thereof. In the event Proprius elects or has elected not to pursue patent protection or to continue to prosecute or maintain any patent or patent application of the Patent Rights, Proprius shall so advise Prometheus in writing not less than [***] days prior to any potential loss of rights; then, Prometheus shall have the right, but not the obligation, to assume prosecution or maintenance of such patent or patent application of the Patent Rights. If Prometheus elects to assume maintenance of such patent or if Prometheus elects to assume prosecution of such patent application, then thereafter, the license to such patent-n the region in question shall either revert to a non-exclusive license or be removed from the Patent Rights, in the sole discretion, and upon the written election, of Prometheus.

8.2 Third Party Infringement of Patent Rights. Each Party agrees to bring to the attention of the other Party any Third Party product it discovers or has discovered which relates to any of the Patent Rights, and to cooperate with each other so that each Party can determine whether a Third Party product may infringe a Valid Claim of a Patent Right. To the extent a Party believes a Third Party may infringe the Patent Rights, the Parties shall reasonably cooperate to address such concerns. Notwithstanding such cooperation, in the event of alleged Third Party infringement, Proprius, at its sole discretion, may pursue enforcement within [***] days of obtaining knowledge of

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such alleged infringement. Prior to taking any formal action to enforce the Patent Rights or prior to communicating to the alleged infringing Third Party regarding such alleged infringement, Proprius shall notify Prometheus in writing of Proprius' intentions to so act. [***] In the event Proprius does not pursue enforcement within the [***] day period, Prometheus, at Prometheus' sole cost, upon prior written notice to Proprius, may (but shall be under no obligation to act) pursue such enforcement action, and if Prometheus obtains any awards or settlement, then Prometheus shall retain exclusively all settlements or awards.

8.3 Infringement involving Third Party Patents. If a Third Party commences suit, or threatens to do so, on the basis of a claim that a Licensed Product manufactured, used or sold by or on behalf of Proprius infringes a patent of such Third Party, Proprius shall be responsible for defending such claim at its sole expense, except as expressly provided in Section 11.1.

8.4 Patent Marking. Proprius shall use reasonable efforts to place all appropriate patent and other intellectual property notices, markings and indicia on Licensed Product and marketing literature for Licensed Products as needed to protect the Patent Rights and the rights for damages for infringement thereof.

9. CONFIDENTIALITY AND PUBLIC ANNOUNCEMENTS

9.1 Confidentiality. It is contemplated that in the course of the performance of this Agreement each Party may disclose from time to time Confidential Information to the other Party. Each Party agrees (a) not to use Confidential Information received from the other for any purpose other than the performance of its rights and obligations hereunder, and (b) not to disclose Confidential Information so received to any Third Party, except as is necessary for such performance (provided such disclosure is subject to similar or more restrictive confidentiality obligations as set forth herein) or as is required by a court or governmental authority or with the written consent of the disclosing Party. In the event that such disclosure to a Third Party is required as set forth above, the disclosing Party shall give to the Party from whom the Confidential Information was received the greatest practical prior written notice so as to permit the latter to take all possible action to perfect and/or safeguard its rights in the Confidential Information. The obligations of the Parties relating to Confidential Information shall expire five (5) years after the later of the termination of this Agreement or the expiration of any Patent Rights; provided, however, each of Proprius' and Prometheus' obligations to keep Prometheus Know-how confidential shall not expire so long as such know-how is within the definition of Confidential Information provided in this Agreement.

9.2 Public Announcements. Within a reasonable time following the Effective Date of this Agreement, the Parties will issue a joint press release announcing the existence of this Agreement in the form and substance mutually agreed upon by the Parties. Except as set forth in the preceding sentence, neither Party shall make any public announcement concerning the transactions contemplated herein, or make any public statement which includes the name of the other Party or any of its Affiliates or otherwise use the name of the other Party or any of its Affiliates in any public statement or document, without the written consent of the other Party, which consent shall not be unreasonably withheld; provided, however, that either Party may make such public announcements or disclosures as may be required by regulation, law or judicial order. Except for any regulatory, legal or judicial disclosure obligation, any such public announcement proposed by a Party that names the other Party shall first be provided in draft to the other Party which shall have fifteen (15) business days to review such draft prior to the issue or publication of the disclosure. Except as expressly permitted by this Section 9.2, neither Party shall publish or otherwise disclose the existence of this Agreement, or its terms, without the other

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Party's prior written consent; provided, however, that a Party may disclose the existence and/or terms of this Agreement to such Party's professional advisors and, on a confidential basis and subject to a written confidentiality agreement not less stringent then the confidentiality terms contained herein and of which the other Party is a third party beneficiary, to potential Third Party investors or acquirors or, in the case of Proprius, to potential Sublicensees, in each case in connection with due diligence or similar investigations by such Third Parties.

10. TERM AND TERMINATION

10.1 Term. This Agreement shall commence on the Effective Date and shall remain in effect for the term of any royalty obligations under Sections 5.4 and 5.5 of this Agreement, unless otherwise terminated earlier pursuant to this Article 10.

10.2 Termination by Either Party. Either Party may terminate this Agreement upon written notice to the other Party in the event the other Party (a) materially breaches this Agreement and fails to cure such breach within [***] days after receipt of written notice of breach from the non-breaching Party, or (b) makes a general assignment for the benefit of creditors, has a receiver appointed on its behalf, or files or otherwise becomes subject to bankruptcy or insolvency proceedings which continues unstayed and in effect for a period of [***] days.

10.3 Termination by Prometheus. In addition to the rights set forth under Section 10.2 related to material breach of this Agreement by Proprius, Prometheus may immediately terminate this Agreement as set forth in Section 3.3.

10.4 Termination by Proprius. In addition to the rights set forth under Section 10.2 related to material breach of this Agreement by Prometheus, Proprius may terminate this Agreement with sixty (60) days written notice, without cause.

10.5 Rights Upon Termination.

(a) Upon termination of this Agreement pursuant to Section 10.2 or 10.3 or 10.4: (i) all rights under the licenses granted hereunder shall automatically terminate, and (ii) any sublicenses (but not any liabilities accrued to date) granted hereunder by Proprius to Third Parties shall remain in effect, but shall be assigned to Prometheus provided that: (A) such sublicense was properly granted hereunder, (B) Prometheus shall have no obligation thereunder other than the obligation to grant the license or sublicense to the applicable Third Party(ies) as set forth in such sublicenses, (C) all restrictions and limitations of this Agreement shall apply to the sublicense as though this Agreement continued in effect, (D) Prometheus shall receive all consideration due in connection with the sublicense and, in any event, the payments to Prometheus based upon the sublicense and activity thereunder shall be at least as great as they would have been to Prometheus had the Agreement remained in effect and such actions had been taken by Proprius, and (E) in addition to any termination rights under the sublicense agreement, Prometheus shall be entitled to terminate such sublicense on the same basis as is provided herein for termination of this Agreement.

(b) Expiration or termination of this Agreement shall not relieve the Parties of any obligation accruing prior to such expiration or termination. Except as set forth below or elsewhere in this Agreement, any accrued rights to payment and the obligations and rights of the Parties under Sections 1, 4, 6, 7, 9, 10, 11, and 12 shall survive expiration or termination of this Agreement.

(c) Within thirty (30) days following the termination of this Agreement, except to the extent and for so long as a Party is entitled to retain license rights under this Agreement,

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each Party shall, upon written request, deliver to the other Party any and all Confidential Information, and any copies thereof, of the other Party in its possession, except that the Party will be entitled to retain one (1) copy of all documents in its legal archives. [***]

(d) Upon termination (but not expiration) of this Agreement, Proprius agrees to immediately discontinue the manufacture and sale of the Licensed Products and the use of the Patent Rights and Prometheus Know-how; *provided, however,* unless this Agreement is terminated pursuant to Section 10.2 for a breach by Proprius, that for up to [***] months after such termination, Proprius shall have the right to sell any existing merchantable inventory of Licensed Products as of the date of termination at its normal prices, unless discounted prices were previously allowed or authorized by Proprius. The sale of all such inventory, however, shall be subject to all of the terms and conditions of this Agreement, including the royalty provisions of Article 5.

11. INDEMNIFICATION; INSURANCE AND LIMITATION OF LIABILITY

11.1 Indemnification by Prometheus. Prometheus shall indemnify, defend and hold harmless Proprius and its officers, directors, employees, agents and representatives ("***Proprius Indemnitees***") from and against any and all liabilities, claims, demands, actions, suits, losses, damages, costs and expenses (including reasonable attorneys' fees) based upon or arising out of Third Party claims resulting from Prometheus' negligence, willful or deliberate misconduct, recklessness or breach of any covenant, agreement, representation or warranty made by Prometheus in this Agreement; provided that Prometheus shall not be required to indemnify Proprius or any Proprius Indemnitee to the extent such liabilities, claims, demands, actions, suits, losses, damages, costs and expenses arise from the negligence, willful or deliberate misconduct, or recklessness of a Proprius Indemnitee, Proprius' breach of this Agreement or any other matter for which Proprius is responsible to indemnify Prometheus pursuant to Section 11.2 of this Agreement.

11.2 Indemnification by Proprius. Proprius shall indemnify, defend and hold harmless Prometheus and its officers, directors, employees, agents and representatives ("***Prometheus Indemnitees***") from and against any and all liabilities, claims, demands, actions, suits, losses, damages, costs and expenses (including reasonable attorneys' fees) based upon or arising out of Third Party claims resulting from Proprius' (or its Affiliates' or Sublicensees') negligence, willful or deliberate misconduct, recklessness, or relating to the development or commercialization of Licensed Products or Patent Rights hereunder by Proprius (or its Affiliates or Sublicensees) or breach of any covenant, agreement, representation or warranty made by Proprius (or its Affiliates or Sublicensees) in this Agreement; provided that Proprius shall not be required to indemnify Prometheus or any Prometheus Indemnitee to the extent such liabilities, claims, demands, actions, suits, losses, damages, costs and expenses arise from the negligence, willful or deliberate misconduct, or recklessness of a Prometheus Indemnitee, Prometheus' breach of this Agreement or any other matter for which Prometheus is responsible to indemnify Proprius pursuant to Section 11.1 of this Agreement.

11.3 Conditions of Indemnification. If either Party proposes to seek indemnification from the other under the provisions of this Article 11, it shall notify the other Party within fifteen (15) days of receipt of notice of any such claim or suit and shall cooperate fully with the other Party in the defense of such claims or suits. No settlement or compromise shall be binding on a Party hereto without

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its prior written consent which shall not be unreasonably withheld. Failure to provide such notice will not relieve indemnity obligation except to the extent adversely effected by failure to receive notice.

11.4 Insurance. During the Term, Proprius shall carry occurrence-based liability insurance with policy limits of at least two million dollars ($2,000,000) per occurrence and five million dollars ($5,000,000) annual aggregate. Upon request, Proprius shall provide Prometheus with evidence of such insurance. Proprius shall have Prometheus and its respective Affiliates, directors, officers, employees, scientists and agents named as additional insured parties on any product liability insurance (or professional liability insurance covering services) policies maintained by Proprius, its Affiliates and Sublicensees applicable to the Licensed Products, and shall ensure that such insurance may not be amended, terminated or allowed to expire without thirty (30) days' prior notice to such additional insureds.

11.5 Limitation of Liability. NEITHER PARTY SHALL BE ENTITLED TO RECOVER FROM THE OTHER PARTY ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING WITHOUT LIMITATION, LOST PROFITS, IN CONNECTION WITH THIS AGREEMENT OR ANY LICENSE GRANTED HEREUNDER, REGARDLESS OF ANY NOTICE OF THE POSSIBILITY OF SUCH DAMAGES. FOR THE PURPOSE OF CLARITY, NOTHING IN THIS SECTION IS INTENDED TO LIMIT THE INDEMNIFICATION OBLIGATIONS OF ANY PARTY WITH RESPECT TO THE CHARACTERIZATION OF ANY CLAIM BY A THIRD PARTY AS SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES.

12. MISCELLANEOUS

12.1 Entire Agreement. This Agreement, together with the exhibits, constitutes the entire agreement between the Parties concerning the subject matter hereof and supersedes all written or oral prior agreements or understandings with respect thereto. Notwithstanding anything in this Section 12.1 to the contrary, the Confidentiality Agreement between the Parties effective November 4, 2005, shall remain in full force and effect.

12.2 Amendment or Modification. No amendment, modification or release from any provision of this Agreement shall be binding, unless in writing signed by an authorized representative of each Party, and no purchase order or acknowledgment form of a Party shall be binding on the other Party.

12.3 Severability. If any term or provision of this Agreement shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other term or provision hereof, and this Agreement shall be interpreted and construed as if such term or provision, to the extent the same shall have been held to be invalid, illegal or unenforceable, had never been contained herein.

12.4 Assignment. Neither Party shall assign this Agreement in whole or in part without the prior written consent of the other Party; provided, however, that subject to Section 2.6 herein, either Party may assign this Agreement without such consent to an Affiliate, in connection with the transfer or sale of substantially its entire business to which this Agreement pertains, or in the event of its merger or consolidation with another company; provided, that, for purposes of clarity, intellectual property rights of a party to such transaction other than one of the initial Parties to this Agreement shall not be included in the technology licensed hereunder. The rights and obligations of the Parties under this Agreement shall be binding upon and inure to the benefit of the successors and permitted assigns of the Parties. Any assignment not in accordance with this Agreement shall be void.

12.5 Independent Contractor. It is expressly agreed that Prometheus and Proprius shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency of any kind. Neither Party shall have the authority to make any statement, representations or commitments of any kind on behalf of the other, or to take any action, which shall be binding on the other Party, without the prior written consent of the other Party.

12.6 Notices. All notice hereunder shall be in writing and shall be delivered (a) personally, (b) by overnight delivery, delivery prepaid, (c) mailed by express mail service, or (d) given by facsimile, to the following addresses of the respective Parties:

If to Prometheus:

Prometheus Laboratories Inc.
9410 Carroll Park Drive
San Diego, California 92121
Attn: Chief Executive Officer
Facsimile Number: (858) 410-1945

With a copy to:

Legal Department
Prometheus Laboratories Inc.
9410 Carroll Park Drive
San Diego, California 92121
Facsimile Number (858) 410-1945

If to Proprius:

12264 El Camino Real, Suite 350
San Diego, California 92130
Attn: Chief Executive Officer
Facsimile Number: (858) 225-3553

Notices shall be effective upon receipt if personally delivered, on the next business day following deposit with an overnight delivery service, on the second business day following the date of delivery to the express mail service if sent by express mail, or the date of transmission (or next business day if transmitted on a non-business day) if sent by facsimile and the sending machine prints a verification of receipt by the receiving machine. A Party may change its address listed above by notice to the other Party.

12.7 Force Majeure. Any delay in the performance of any of the duties or obligations of either Party under this Agreement caused by an event outside the affected Party's reasonable control shall not be considered a breach of this Agreement, and the time required for performance shall be extended for a period equal to the period of such delay. Such events shall include, without limitation: acts of God; riots; embargoes; labor disputes, including strikes, lockouts, job actions, or boycotts; fires; explosions; earthquakes; floods; shortages of material or energy; or other unforeseeable causes beyond the reasonable control and without the fault or negligence of the Party so affected. The Party so affected shall give prompt notice to the other Party of such cause and shall take whatever reasonable steps are necessary to relieve the effect of such cause as rapidly as possible.

12.8 Governing Law. This Agreement shall be construed, interpreted and governed by the laws of the State of California, without regard to conflicts of law principles and without regard to the United Nations Convention on Contracts for the International Sale of Goods.

12.9 Dispute Resolution. The parties hereto expressly agree that in the event of any dispute, controversy or claim by any party against the other party regarding this Agreement, the prevailing party shall be entitled to reimbursement by the other party to the proceeding of reasonable attorney's fees and costs incurred by the prevailing party. Any dispute, controversy or claim arising hereunder or in any way related to this Agreement shall be resolved by arbitration in the County of San Diego, State of California by JAMS-Endispute. The arbitration shall be conducted by a sole arbitrator appointed by JAMS-Endispute (the "Arbitrator"). The Arbitrator's decision shall be final and binding on all parties. The Arbitrator shall have no authority to award damages for emotional distress, punitive damages or equitable relief. The parties intend that this arbitration provision be irrevocable and be construed as broadly as possible. The arbitration shall be governed by the provisions of California's Arbitration Act, and judgment upon the award rendered by the Arbitrator may be entered by any court having jurisdiction thereof. Notwithstanding the above, to the full extent allowed by law, either Party may bring an action in any court of competent jurisdiction for injunctive relief (or any other provisional remedy) to protect the Parties' rights or enforce the Parties' obligations under this Agreement pending final resolution of any claims related thereto in an arbitration proceeding as provided above. In addition, either Party may bring an action in any court of competent jurisdiction to resolve disputes pertaining to the validity, construction, scope, enforceability, infringement or other violations of patents or other proprietary or intellectual property rights.

12.10 Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the Parties hereto and its respective assigns and successors in interest.

12.11 Waiver. No waiver or modification of any of the terms of this Agreement shall be valid unless in writing and signed by an authorized representative of the Parties. Failure by either Party to enforce any rights under this Agreement shall not be construed as a waiver of such rights, nor shall a waiver by either Party in one or more instances be construed as constituting a continuing waiver or as a waiver in other instances.

12.12 Exhibits. All exhibits that are attached to this Agreement are incorporated herein by reference.

12.13 Headings. The headings used in this Agreement are for convenience and reference purposes only and shall not affect the meaning or interpretation of this Agreement.

12.14 Counterparts. This Agreement may be executed in two (2) or more original counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, each Party has caused this Agreement to be executed on its behalf by its duly authorized officer as of the Effective Date.

PROMETHEUS LABORATORIES INC.		PROPRIUS, INC.	
By:	/s/ Joseph M. Limber	By:	/s/ Michael J. Walsh
Printed Name:	Joseph M. Limber	Printed Name:	Michael J. Walsh
Title:	President, CEO	Title:	President & CEO
Date:	September 19, 2007	Date:	September 13, 2007

Exhibit 1.9

PATENT RIGHTS

MTX PORTFOLIO
CONFIDENTIAL
PATENT PROPERTY STATUS REPORT

TTC Ref Country ATTY(s) Handling	Client's Ref	Title	Inventor	Application No. Filing Date	Patent No. Issue Date	Status Remarks
[***]		[***]	[***]	[***]		[***]
[***]		[***]	[***]	[***]		[***]
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Exhibit 10.6

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

FIRST AMENDMENT
TO LICENSE AGREEMENT

THIS FIRST AMENDMENT, effective as of October 23, 2013 (the "Effective Date"), is to that certain License Agreement dated September 13, 2007, (the "License Agreement") by and between Prometheus Laboratories Inc. ("*Prometheus*") and Cypress Bioscience, Inc. as successor in interest to Proprius, Inc., which was subsequently assigned to Exagen Diagnostics, Inc. ("*Exagen*"). Prometheus and Exagen are each sometimes referred to individually as a "*Party*" and together as the "*Parties*." All capitalized terms not defined herein shall have the meaning ascribed to them in the License Agreement.

WHEREAS, Prometheus and Exagen wish to amend the License Agreement with regard to development and clinical testing activities, marketing, milestones and royalties as described below and otherwise amend the License Agreement on the terms set forth herein;

NOW, THEREFORE, the Parties hereby agree to the following:

1. All references to Proprius in the Agreement shall be understood to reference Exagen.

2. Section 3.1 (Development and Clinical Testing Activities) shall be deleted in its entirety and replaced with the following:

3.1 Development and Clinical Testing Activities. Exagen shall use Reasonable Commercial Efforts to undertake development activities for the Licensed Product, including, but not limited to, conducting or having conducted, and completing or having completed: (a) those three (3) clinical studies described on Exhibit 3.1 hereto; and (b) a dossier to be used for communications with managed care entities that explains the advantageous pharmacoeconomics associated with use of the Licensed Product no later than March 30, 2014. Exagen shall bear the costs and expenses related to all development activities set forth above of the Licensed Products. Exagen acknowledges and agrees that these development activities are critical to the commercial success of the Licensed Product and agrees that should Exagen fail to timely complete the dossier described in section (b) of this section or to timely accomplish those three (3) clinical studies described on Exhibit 3.1, Exagen will pay Prometheus a one-time payment of Fifty Thousand Dollars ($50,000). In addition, if applicable, Exagen shall use Reasonable Commercial Efforts to undertake any other development activities for the Licensed Product, required for approvals from the applicable Regulatory Authorities. Exagen shall bear all costs and expenses related to the development of the Licensed Products.

3. Section 3.4 (Licensed Product Development and Marketing) shall be deleted in its entirety and replaced with the following:

3.4 Licensed Product Development and Marketing. Exagen shall use Reasonable Commercial Efforts, by itself, an Affiliate or through a Sublicensee, to develop, market and sell Licensed Products in the United States, Exagen shall also use Reasonable Commercial Efforts to develop Licensed Products in such other regions in the Territory as

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Exagen deems commercially reasonable, and to market and sell Licensed Products in all regions in the Territory where appropriate regulatory and marketing approvals have been obtained from the applicable Regulatory Authorities. Exagen, at Exagen's own expense, or as applicable, a Sublicensee, at its own expense, shall be responsible for all development and commercial activities and expenses related to undertaking the obligations pursuant to this Section 3.4. For the avoidance of doubt, Reasonable Commercial Efforts to commercialize the Licensed Products shall include a compensation structure for the applicable members of Exagen's Sales Force that are responsible for detailing the Licensed Products (each a "*Sales Representative*") with a variable incentive compensation component based on the Promotion of the Licensed Products, as described below:

(a) At least [***] of the annual targeted incentive compensation percentage for each Sales Representative for the first (1st) year beginning January 01, 2014 shall be based on his/her performance related to minimum Details and minimum Sales Achievement of the Licensed Product, where a "*Detail*" is defined as "an interactive face-to-face visit in the Territory by a Sales Representative with a physician or his or her legally empowered designee, during which the indicated uses and other relevant characteristics of the Licensed Products may be described by such Sales Representative in a fair and balanced manner consistent with Applicable Law; however, incidental contacts between such sales representatives and a physician will not constitute a Detail;" and "*Sales Achievement*" is defined as actual sales of Licensed Products compared to commercially reasonable sales goals prescribed for each individual geographic territory.

(b) At least [***] of the incentive compensation percentage for each Sales Representative for the second (2nd) year (January 01, 2015) following the Effective Date and for all years thereafter in which there exists a Valid Claim on a Licensed Product shall be based on his/her performance related to the Detailing of the Product.

4. Section 5.3 Milestone Payments shall be deleted in its entirety and replaced with the following:

5.3 Milestone Payments. In addition to the payments described in Sections 5.1 and 5.4 of this Agreement, Exagen shall make the following one-time cash milestone payment to Prometheus within ninety (90) days of the occurrence of the event:

MILESTONE EVENT	PAYMENT
Achievement of greater than or equal to U.S$20,000,000 in cumulative Net Sales of all Licensed Products (determined in the aggregate for sales by Exagen, its Affiliates and Sublicensees)	U.S$2,000,000

For the avoidance of doubt, the License Agreement is amended to remove the concept of a Milestone Payment Cap, and any reference to that term or concept is hereby deleted, including, but not limited to the reference in Section 5.3.

5. Section 5.4 Royalty Payments to Prometheus shall be deleted in its entirety and replaced with the following:

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5.4 Royalty Payments to Prometheus. In partial consideration of the license rights granted to Exagen hereunder, Exagen shall pay to Prometheus royalties based on Net Sales of Licensed Products by Exagen and its Affiliates and its sublicenses in countries where a Valid Claim of the Patent Rights covering such Licensed Products exists at the royalty rates set forth below:

Net Sales	Royalty Rate
On Annual Net Sales in a calendar year less than [***]	[***]
On Annual Net Sales in a calendar year equal to or greater than [***] and less than [***]	[***]
On Annual Net Sales in an calendar year equal to or greater than [***]	[***]

Subject to the termination provisions of Article 10 of this Agreement, Exagen's obligation to pay royalties to Prometheus on Licensed Products covered by a Valid Claim of the Patent Rights in each country shall expire on the date when the last patent containing a Valid Claim in such country expires, lapses or is invalidated.

6. Except as expressly amended in this First Amendment, all terms and provisions of the License Agreement shall remain in full force and effect.

In witness whereof, the parties have executed this First Amendment as of the date first set forth above.

EXAGEN DIAGNOSTICS, INC.

/s/ Ron Rocca
Name: Ron Rocca
Title: President and CEO

PROMETHEUS LABORATORIES INC.

/s/ Lisa A. Miller
Name: Lisa A. Miller
Title: President and CEO

Approved by the Legal Dept. of Prometheus Laboratories Inc.:

Approved by the Finance Dept. of Prometheus Laboratories Inc.:

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Exhibit 3.1
Clinical Studies

Avise PG participating Clinical Trials

Sponsor	Title	Purpose	Subjects/ Timeline	Exagen Role	Comments
University of Alabama at Birmingham	Treatment Efficacy and Toxicity in Rheumatoid Arthritis Database and Repository	To stimulate collaborative efforts of federal funding agencies, voluntary health agencies, professional organizations and industry partners to enable creation of a large, sustainable **database and repository** to better understand the molecular basis of **treatment** and rapidly accelerate translational research in RA.	N=200 February 2010 to August 2012	Provide methotrexate polyglutamate concentration testing.	Exagen performed MTXPG testing from February to June 2013
Pfizer Inc.	A Randomized, Double-blind, Placebo-controlled Study of the Safety and	The first 12 weeks of this study will compare the efficacy of etanercept 50 mg once-	N=168 August 2013 to May 2014	Provide methotrexage polyglutamate concentration testing.	

Efficacy of Etanercept in Subjects With Rheumatoid Arthritis Who Have Had an Inadequate Response to Adalimumab or Infliximab Plus Methotrexate	weekly to placebo in subjects with rheumatoid arthritis who have not responded well to infliximab or adalimumab plus methotrexate. This comparison will be performed for all subjects and separately for subjects who are anti-drug antibody positive for one of these medications. From week 12 to week 24, all subjects will receive etanercept 50 mg once-weekly. The effect of anti-drug antibody status on the efficacy of etanercept as well as the safety profile of etanercept in these subjects will also be evaluated

		throughout the study.			
Keio University	**MAGIK** Study: **M**ethotrexate as an **A**nchor drug **I**n Japanese Rheumatoid arthritis monitored by erythrocyte polyglutamate concentration in **K**eio Rheumatology Expert Meeting.	A proportion of Japanese patients with rheumatoid arthritis can be treated quite will with rather low dose methotrexate (sometimes 6-8mg/week). We suppose that the MTXPG concentration can reach the point at which rheumatoid arthritis should be controlled (say at 60 as you have reported) with lower MTX dose in Japanese than in Caucasians. We'd like to prove this and establish the optimal usage in Japanese patients.	N=100 September 2012- end of 2014.	Provide methotrexage polyglutamate concentration testing.	50 subjects have been enrolled.

ASSET PURCHASE AGREEMENT

THIS ASSET PURCHASE AGREEMENT ("***Agreement***") is made and entered into as of February 9, 2009, by and among: **CYPRESS BIOSCIENCE, INC.,** a Delaware corporation ("***Cypress***"); and **CELLATOPE CORPORATION,** a Delaware corporation ("***Cellatope***"). Each of Cypress and Cellatope is sometimes referred to herein as a "***party***" and together Cypress and Cellatope are sometimes referred to herein as the "***parties***." Certain other capitalized terms used in this Agreement are defined in **Exhibit A**.

RECITALS

WHEREAS, Cellatope wishes to sell and transfer the Acquired Assets to Cypress, and Cypress wishes to purchase and acquire the Acquired Assets from Cellatope, including the assumption of certain specified Liabilities relating to the Acquired Assets;

WHEREAS, as an inducement to Cypress to enter into this Agreement, Cypress has entered into Consulting Agreements with Edward L. Erickson and Daniel Graziano in the form attached hereto as **Exhibit B** (each a "***Consulting Agreement***") concurrent with the execution of this Agreement, which agreements will become effective immediately following the Closing;

WHEREAS, as an inducement to Cypress to enter into this Agreement, the stockholders of Cellatope set forth on **Exhibit C** have entered into an agreement with Cypress in the form attached hereto as **Exhibit D** (a "***Voting Agreement***") concurrent with the execution of this Agreement, pursuant to which each such Person has agreed, among other things, to vote the shares of Cellatope Capital Stock owned by such Person to approve this Agreement and the transactions contemplated hereby;

WHEREAS, as an inducement to Cypress to enter into this Agreement, Cellatope, Cypress and Innovation Works, Inc., a Pennsylvania not-for-profit corporation ("***Innovation Works***") have entered into a letter agreement concurrent with the execution of this Agreement and in the form attached hereto as **Exhibit E** (the "***Innovation Works Agreement***"), which Innovation Works Agreement shall become effective in connection with the Closing; and

WHEREAS, the Boards of Directors of each of Cypress and Cellatope deem it advisable and in the best interest of such Entity and its respective stockholders that Cypress acquire the Acquired Assets.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual representations, warranties and covenants herein contained, and on the terms and subject to the conditions herein set forth, the parties hereto hereby agree as follows:

1. PURCHASE AND SALE OF ASSETS; RELATED TRANSACTIONS

1.1 Sale of Assets.

(a) Cellatope shall sell, assign, transfer, convey and deliver to Cypress, and shall cause each of its Affiliates to sell, assign, transfer, convey and deliver to Cypress, at the Closing of the sale and purchase of the Acquired Assets as set forth in this Agreement, all of its or their rights, title and interest in and to the Acquired Assets, free and clear of any Encumbrances, on the terms and subject to the conditions set forth in this Agreement. For purposes of this Agreement, "***Acquired Assets***" shall consist of:

(i) the Acquired Technology;

(ii) all documentation in the possession or Control of Cellatope or its Affiliates as of the Closing Date regarding the Acquired Technology, whether in written, graphic or electronic form and however embodied;

(iii) to the extent in the possession or Control of Cellatope and/or its Affiliates as of the Closing Date:

(1) any and all worldwide regulatory documentation regarding the Technology or a Lupus Monitoring Product, including, without limitation, complete copies of all existing regulatory approvals or filings for the Technology or any Lupus Monitoring Product, all supplements thereto and all other regulatory files and correspondence with any Governmental Body relating to the Technology or any Lupus Monitoring Product;

(2) any and all research and development data and information related to the Technology or any Lupus Monitoring Product, whether in written, graphic or electronic form and however embodied, including, without limitation, safety data, clinical trial protocols, draft and final study reports, case report forms, laboratory notebooks and records, and data for the Technology or any Lupus Monitoring Product;

(3) any and all manufacturing protocols, batch or other manufacturing records and current standard operating procedures for manufacture of the Technology or any Lupus Monitoring Product, including, without limitation, quality analysis and quality control methodologies and standards;

(4) any and all inventory (including in each case, without limitation, work-in-process and in-transit inventory) of the Technology or any Lupus Monitoring Product (the "***Inventory***"), and any rights of Cellatope or any of its Affiliates to any warranties received from manufacturers with respect to such Inventory. **Schedule 1.1(a)(iii)(4)** attached hereto sets forth a description of the Inventory in the possession or control of Cellatope or any of its Affiliates as of the date of this Agreement and the location(s) at which such Inventory is stored; and

(5) any and all equipment, materials, prototypes, tools, supplies, vehicles, furniture, fixtures, improvements, components and other tangible assets of

Cellatope used in connection with the Technology or any Lupus Monitoring Product, as set forth on **Schedule 1.1(a)(iii)(5)** (together with the Inventory, the "***Acquired Fixed Assets***");

(iv) the Acquired Contracts (as set forth on **Schedule 1.1(a)(iv)** attached hereto);

(v) all Government Authorizations held by Cellatope or any of its Affiliates in connection with the Acquired Technology (including the Governmental Authorizations identified in Part 3.8 of the Cellatope Disclosure Schedule);

(vi) all claims and causes of action of Cellatope or any of its Affiliates against other Persons (regardless of whether or not such claims and causes of action have been asserted by Cellatope), and all rights of indemnity, warranty rights, rights of contribution, rights to refunds, rights of reimbursement and other rights of recovery possessed by Cellatope or any of its Affiliates with respect to the Acquired Technology (regardless of whether such rights are currently exercisable); and

(vii) to the extent not included in clauses (i) through (vi) above, any and all right, title or interest of Cellatope or any of its Affiliates in or to the Technology or any Lupus Monitoring Product or any method of making or using the Technology or any Lupus Monitoring Product.

(b) Notwithstanding anything herein to the contrary, all the assets of Cellatope not included in the Acquired Assets, including without limitation the assets listed on **Schedule 1.1(b)** (the "***Excluded Assets***") shall not be sold or transferred hereunder, shall be excluded from the definition of Acquired Assets and shall remain the property of Cellatope.

(c) Cellatope agrees to, and shall cause its Affiliates to, execute all assignment and other documents, testify and take all other actions necessary or appropriate to transfer, effect, confirm, perfect, record, preserve, protect and enforce Cypress' rights, title and interests in the Acquired Assets and to obtain, maintain, enforce or defend Cypress' Patent and other Intellectual Property Rights in any of the Acquired Assets throughout the world (including all rights and powers arising or accrued from such Intellectual Property including the right to sue for damages and other remedies and to have the benefit of any remedy obtained on any supposed infringement of such Intellectual Property before the date of the assignment or transfer and including, without limitation, making relevant inventors of the Acquired Technology available to Cypress), at the reasonable request and expense (to the extent of any out-of-pocket costs incurred by Cellatope or any of its Affiliates) of Cypress. From and after the Closing Date, Cypress shall be solely responsible for the preparation, filing, prosecution, maintenance, enforcement and defense (and, except to the extent set forth in Section 10 hereof, the costs related thereto) of the Acquired Technology. If Cellatope or any of its Affiliates has any rights to the Acquired Technology that cannot be transferred to Cypress, then, except as expressly set forth in Section 2.2(c) below, Cellatope unconditionally and irrevocably waives, and shall cause its Affiliates to unconditionally and irrevocably waive, the enforcement of such rights and all claims and causes of action of any kind against Cypress with respect to such rights, Cellatope agrees, and shall cause its Affiliates to agree, at Cypress' request and expense, to consent to and join in any action to enforce such rights. If Cellatope or any of its Affiliates has any right to Acquired

Technology that cannot be assigned to Cypress or waived by Cellatope or such Affiliates, then, except as expressly set forth in Section 2.2(c) below, Cellatope unconditionally and irrevocably grants, and shall cause its Affiliates to unconditionally and irrevocably grant, to Cypress during the term of such rights, an exclusive, irrevocable, perpetual, worldwide, fully paid and royalty-free license, with rights to sublicense through multiple levels of sublicensees, to reproduce, create derivative works of, distribute, publicly perform and publicly display by all means now known or later developed, such rights.

(d) On or after the Closing Date (as requested by Cypress), Cellatope shall, and shall cause its Affiliates to: (a) execute and deliver to Cypress such bills of sale, endorsements, assignments and other documents as may (in the reasonable judgment of Cypress or its counsel) be necessary or appropriate to sell, assign, transfer, convey and deliver to Cypress good and valid title to the Acquired Assets free and clear of any Encumbrances, including, without limitation, assignment agreements with respect to the Acquired Patents and the Acquired Trademarks in the forms set out in **Exhibit F, Exhibit G** and **Exhibit O,** respectively, hereto; (b) deliver, or cause to be delivered, to Cypress or its designee all tangible items included in the Acquired Assets including all Information comprising Acquired Technology or, in the case of documents, complete and accurate copies thereof; and (c) deliver, or cause to be delivered, to Cypress or its designee complete and accurate copies of all Patents included in the Acquired Patents, other documentation in the possession or Control of Cellatope or any of its Affiliates regarding the Acquired Patents, a full, up-to-date, prosecution file wrapper for all Patents included in the Acquired Patents and any correspondence between Cellatope or any of its Affiliates and the U.S. Patent & Trademark Office or any foreign patent office with respect to the Acquired Patents.

(e) Following the Closing, the parties shall cooperate with each other to identify any assets that were not transferred as part of the Acquired Assets at the Closing but that, pursuant to the provisions of this Agreement, were required to be transferred (the "***Nontransferred Assets***"). To the extent any Nontransferred Assets are identified and Cellatope or any of its Affiliates, as applicable, is legally and contractually permitted to transfer such assets, Cellatope shall, and shall cause its Affiliates to, at no cost to Cypress, promptly take all actions to transfer such Nontransferred Assets to Cypress. In the event Cellatope or any of its Affiliates, as applicable, is required to obtain the Consent of any Person prior to the transfer of any Nontransferred Asset, then Cellatope shall, and shall cause its Affiliates to, at its or their own expense, use its commercially reasonable efforts to promptly obtain such Consent, and upon obtaining such Consent, shall promptly transfer such Nontransferred Asset to Cypress. In the event Cellatope or any of its Affiliates, as applicable, is unable to obtain such Consent, then Cellatope and Cypress shall discuss in good faith an appropriate resolution for the transfer of the economic benefit of such Nontransferred Asset to Cypress.

1.2 Assumption of Liabilities.

(a) For purposes of this Agreement "***Assumed Liabilities***" shall mean only the following liabilities of Cellatope:

(i) the obligations of Cellatope under the Acquired Contracts, but only to the extent such obligations (A) arise after the Closing Date, (B) do not arise from or relate to

any breach by Cellatope of any provision of any of such Acquired Contracts prior to or as of the Closing Date, (C) do not arise from or relate to any event, circumstance or condition occurring or existing on or prior to the Closing Date that, with notice or lapse of time, would constitute or result in a breach of any of such Acquired Contracts, and (D) do not arise from the failure to obtain any required Consent from any third party, if any, in connection with the assignment and transfer of such Acquired Contracts to Cypress pursuant to this Agreement;

(b) For purposes of this Agreement, all Liabilities not expressly included in the definition of Assumed Liabilities are referred to as "***Excluded Liabilities***."

1.3 Closing; Closing Date. The consummation of the Transactions (the "***Closing***") shall take place at the offices of Cooley Godward Kronish L.L.P, 4401 Eastgate Mall, San Diego, California 92121 at 10:00 a.m. Pacific Time on a date to be mutually agreed upon by Cypress and Cellatope which shall not be more than three business days after the date on which the last of the conditions set forth in Sections 7 and 8 (other than conditions which by their terms must be satisfied as of the Closing Date) has been satisfied or waived, or such other time and/or place as may be mutually agreed upon by Cypress and Cellatope, The date on which the Closing actually takes place is referred to in this Agreement as the "***Closing Date***."

2. CONSIDERATION

2.1 Closing Consideration.

(a) Subject to Section 2.3, as consideration for the sale of the Acquired Assets to Cypress, at the Closing, Cypress shall pay to Cellatope $2,000,000 in cash via wire transfer to an account designated by Cellatope in writing to Cypress not less than two business days prior to the Closing (the "***Closing Consideration***").

(b) Cellatope shall bear and pay, and shall reimburse Cypress and Cypress' Affiliates for, any sales, use, transfer or similar Taxes, or documentary charges, recording fees or similar charges, fees or expenses that may become payable in connection with (i) the sale of the Acquired Assets to Cypress pursuant to this Agreement and (ii) any of the other transactions contemplated by this Agreement or any of the Related Agreements to which Cellatope is a party ((i) and (ii) collectively, the "***Transactions***"), other than recording fees and similar costs (including attorneys and patent agent fees) related to filing the assignment of any Acquired Patents or Acquired Trademarks with the United States Patent and Trademark Office.

(c) The consideration referred to in Section 2 shall be allocated among the Acquired Assets in accordance with **Exhibit H** attached hereto. The allocation prescribed by such schedule shall be conclusive and binding upon Cypress and Cellatope for all purposes, and no party shall file any Tax Return or other document with, or make any statement or declaration to, any Governmental Body that is inconsistent with such allocation.

2.2 Milestone Consideration.

(a) Subject to Section 2.2(e) and Section 10.6, Cypress shall be obligated to pay to Cellatope $3,000,000 (as such amount may be offset pursuant to the provisions of Section 2.2(e) and Section 10.6, the "***Milestone Consideration***") upon the First Commercial Sale by

Cypress, any of its Affiliates or any Licensee of a Product for monitoring of Systemic Lupus Erythematosus (a "***Lupus Monitoring Product***") (the "***Milestone***"), with any such payment to be made in accordance with the provisions of Section 2.2(d). For avoidance of doubt, only a Product for monitoring of Systemic Lupus Erythematosus, and not any Product designed for diagnosis of Systemic Lupus Erythematosus without a monitoring function, shall constitute a Lupus Monitoring Product. Upon the achievement of the Milestone, Cypress shall notify Cellatope in writing (the "***Milestone Notice***") within 10 business days that the Milestone has been achieved and the date on which it was achieved. Within 20 business days of achievement of the Milestone, Cypress shall pay to Cellatope the Milestone Consideration in cash, as may be reduced pursuant to the terms of Section 2.2(e) and Section 10.6, by wiring or causing to be wired the Milestone Consideration to an account designated by Cellatope for such purpose in writing not less than two business days prior to the date on which the Milestone Consideration is to be paid.

(b) Cypress shall act in good faith and use commercially reasonable efforts to cause the Milestone to be achieved; *provided, however,* that the obligation of Cypress to use commercially reasonable efforts to achieve the Milestone shall not require that the Milestone ever be achieved if doing so, in any case, would require Cypress to use more than commercially reasonable efforts and, *provided, further,* that a termination of development by Cypress of all Lupus Monitoring Products pursuant to Section 2.2(c) below shall not be deemed a failure by Cypress to use, or otherwise violate Cypress' obligations to use, commercially reasonable efforts to develop a Lupus Monitoring Product, The parties acknowledge and agree that Cypress may terminate development of all Lupus Monitoring Products at any time if achieving the Milestone would require Cypress to use more than commercially reasonable efforts to do so, and that any such termination may occur without requiring that Cypress also terminate the Amended Pittsburgh License in accordance with Section 2.2(c) below. Cypress shall provide notice to Cellatope of its determination to terminate development of all Lupus Monitoring Products because achieving the Milestone would require Cypress to use more than commercially reasonable efforts to do so within 15 days of making such determination, including reasonable details supporting such determination and, in such case, Cypress shall comply with the provisions of Section 2.2(c)(ii) below. The parties further acknowledge and agree that nothing in this Agreement shall prohibit Cypress from engaging in a change of control-type transaction or a sale or license of all or any of the Acquired Assets, *provided* that in the event that Cypress desires to consummate a Change of Control after the Closing Date while the Milestone has not been attained but remains eligible to be attained, Cypress shall cause the Entity acquiring Cypress (or acquiring substantially all of its assets) with respect to a Change of Control (the "***Acquirer***") to assume Cypress' obligations under Section 2.2 of this Agreement, subject to all of the limitations and qualifications contained in Section 2.2 of this Agreement (including that such Acquirer use commercially reasonable efforts and the right of such Acquirer to terminate development of all Lupus Monitoring Products). With respect to any Change of Control, Cypress shall not consummate such Change of Control unless (i) Cypress remains liable for Cypress' payment obligations with respect to the Annual Payments and the Milestone Consideration and the Acquirer otherwise assumes Cypress' obligations in Section 2.2 in a form and substance reasonably acceptable to Cellatope *(provided*, that Cellatope's prior acceptance or approval shall not be required if such assumption is unqualified), in which case the parties acknowledge and agree that, following any such assumption (unless Cypress is merged with the Acquirer and remains the surviving Entity or becomes a subsidiary of the Acquirer), Cypress

shall have no further liability or obligation, whether primarily or secondarily, with respect to the obligations in Section 2.2 hereunder, except for the payment obligations with respect to the Annual Payments and the Milestone Consideration or (ii) the Acquirer is an Applicable Public Company and assumes Cypress' obligations under Section 2.2 of this Agreement in a form and substance reasonably acceptable to Cellatope *(provided*, that Cellatope's prior acceptance or approval shall not be required if such assumption is unqualified), in which case the parties acknowledge and agree that, following any such assumption (unless Cypress is merged with the Acquirer and remains the surviving Entity or becomes a subsidiary of the Acquirer), Cypress shall have no further liability or obligation, whether primarily or secondarily, with respect to the obligations in Section 2.2 hereunder, including the payment obligations with respect to the Annual Payments and the Milestone Consideration.

(i) For purposes of this Section 2.2(b), "commercially reasonable efforts" means the use of efforts, expertise and resources normally used by Cypress for other product candidates, which, as compared with the Product candidates for Lupus Monitoring Products acquired by Cypress in connection with the Transactions (the "***Lupus Monitoring Product Candidates***"), are of similar market potential at a similar stage in their development, taking into account all reasonable relevant factors affecting the cost, risk and timing of development and the total potential of the Lupus Monitoring Product Candidates, all as measured by the facts and circumstances at the time such efforts are due.

(ii) Cellatope may allege that Cypress is not using commercially reasonable efforts to achieve the Milestone at any time by providing written notice to Cypress to such effect, including reasonable details supporting such allegation, and setting forth specific reasonable actions that Cellatope requests that Cypress take with respect to its efforts to achieve the Milestone. If Cellatope provides any such notice, each party shall appoint an executive officer or other authorized person to discuss, and attempt to resolve, the alleged failure to perform to both parties' satisfaction. These Persons shall, by phone or in person, discuss the alleged failure to perform in good faith within 15 days after Cellatope provides the applicable notice. If, within 30 days after Cellatope provides the applicable notice, the two executive officers have not reached a mutually acceptable resolution to the alleged failure to perform, Cellatope may submit the matter to arbitration conducted by one arbitrator mutually agreeable to Cypress and Cellatope, In the event that, within 30 days after submission of any dispute to arbitration, Cypress and Cellatope cannot mutually agree on one arbitrator, then the parties shall arrange for the American Arbitration Association to designate a single arbitrator in accordance with the rules of the American Arbitration Association. Any such arbitration shall be held in San Diego County, California, under the rules and procedures then in effect of the American Arbitration Association. The arbitrator shall determine how all expenses relating to the arbitration shall be paid, including the respective expenses of each party, the fees of the arbitrator and the administrative fee of the American Arbitration Association. The arbitrator shall set a limited time period and establish procedures designed to reduce the cost and time for discovery while allowing Cypress and Cellatope an opportunity, adequate in the sole judgment of the arbitrator, to discover relevant information from the opposing party about the alleged failure to perform. The arbitrator shall rule upon motions to compel or limit discovery and shall have the authority to impose sanctions, including attorneys' fees and costs, to the same extent as a competent court of law or equity, should the arbitrator determine that discovery was sought without substantial justification or that discovery was refused or objected to without substantial

justification. The arbitrator's decision shall be limited to the precise question of whether Cypress has used commercially reasonable efforts to achieve the Milestone and the specific actions, if any, to be taken by Cypress that are necessary for Cypress to meet its obligation to use such commercially reasonable efforts, and shall be subject to the limitations set forth in this Agreement and be final, binding and conclusive upon the parties. The parties acknowledge and agree that Cypress may, in lieu of taking the actions, if any, specified by the arbitrator as being necessary for Cypress to meet its obligation to use commercially reasonable efforts, pay to Cellatope the Milestone Consideration in accordance with this Section 2. The arbitrator's decision shall be written and shall be supported by written findings of fact and conclusions. The parties acknowledge and agree that the dispute resolution mechanism and remedy set forth in this Section 2.2(b)(ii) shall be the sole and exclusive method of dispute resolution and remedy available to the parties with respect to disputes arising under Section 2.2(b), and that the provisions of Section 10 shall be inapplicable to any dispute arising under Section 2.2(b).

(c) The parties also acknowledge and agree that, subject to Section 2.2(c)(i) and (ii) below, Cypress may terminate development of all Lupus Monitoring Products at any time by terminating the Amended Pittsburgh License in accordance with its terms and conditions, and, upon such termination, Cypress' obligations to use commercially reasonable efforts to cause the Milestone to be achieved under Section 2.2(b) shall terminate. In the event that Cypress terminates development of all Lupus Monitoring Products, Cypress shall:

(i) if such termination occurs in connection with the termination of the Amended Pittsburgh License, provide the University of Pittsburgh and Cellatope with written notice not less than 10 days prior thereto of its intent to terminate the Amended Pittsburgh License in accordance with its terms and conditions; and

(ii) take such reasonable actions as may be requested by Cellatope, at Cellatope's cost and expense, to transfer to Cellatope any discoveries, know-how, data and technical information owned, Controlled or developed by Cypress related to any Lupus Monitoring Product and necessary for the development or commercialization of such Lupus Monitoring Product (the "***Cypress IP***"); *provided, however;* that to the extent that Cypress determines, in its reasonable discretion, that any such Cypress IP relates to any product developed by Cypress, being developed by Cypress or that Cypress reasonably expects to develop, Cypress shall retain ownership or control rights in such Cypress IP such that Cypress shall be entitled to retain and use such Cypress IP for its independent use and Cypress shall be deemed to have granted to Cellatope a perpetual, royalty-free limited license to use such Cypress IP solely for use in developing and commercializing Lupus Monitoring Products, all on such other terms to be agreed to by the parties.

(d) During the time that Cypress is actively developing any Lupus Monitoring Product, upon request of Cellatope, but not more frequently than once every two calendar quarters, Cypress shall provide Cellatope with a written summary describing in reasonable detail the status of achieving the Milestone. Any summaries or other information provided by Cypress to Cellatope pursuant to this Section 2.2(d) shall be governed by the Mutual Non-Disclosure Agreement dated April 21, 2008 by and between Cypress and Cellatope (the "***Confidentiality Agreement***").

(e) In the event that Cypress has not (1) achieved the Milestone or (ii) terminated development of all Lupus Monitoring Products pursuant to Section 2.2(b) or Section 2 2(c) above on or before December 31, 2011, Cypress shall pay to Cellatope an annual payment of $250,000 in cash (in the manner directed by Section 2.1) on January 1 of each year (each an "***Annual Payment***") beginning on January 1, 2012 and continuing until the earlier of: (i) January 1, 2016, (ii) Cypress' achievement of the Milestone or (iii) Cypress' termination of development of all Lupus Monitoring Products pursuant Section 2.2(b) or Section 2.2(c) above. In the event that the Milestone is achieved following the payment of one or more Annual Payments, the Milestone Consideration (as may be further reduced pursuant to Section 10.6) shall be reduced by the aggregate amount of all Annual Payments made as of the date such Milestone Consideration is paid. The amount of each Annual Payment is also subject to reduction pursuant to the provisions of Section 10.6 herein.

(f) All cash payments hereunder shall be payable in U.S. dollars.

(g) During the period beginning on the Closing Date and ending on the earlier of the payment of the Milestone Consideration or the termination of development of all Lupus Monitoring Products (the "***Payment Period***"), Cypress shall keep (and shall cause its Affiliates and Licensees to keep) records pertaining to the development of Lupus Monitoring Products in sufficient detail to permit Cellatope to confirm whether the Milestone has been achieved and the accuracy and completeness of any summaries provided pursuant to Section 2.2(d). Such records shall be maintained for a period of at least one year after the Payment Period (and for the duration of any period in which the process contemplated by Section 2.2(b)(ii) shall be pending). During the Payment Period and for one year thereafter, Cellatope shall have the right to inspect such records, which inspection rights may be exercised during normal business hours upon reasonable prior written notice to Cypress and, in each case, no more than once a calendar year. Cellatope shall bear the full cost of any such inspection, unless such inspection discloses a payment failure by Cypress of the Milestone Consideration payable under Section 2.2(a), in which case, Cypress shall bear the reasonable cost of the inspection. Information disclosed pursuant to this Section 2.2(g) shall be governed by the Confidentiality Agreement.

2.3 Escrow; Release from Escrow of Cash; Innovation Works Holdback.

(a) Upon the Closing, Cypress shall withhold, from the Closing Consideration otherwise payable to Cellatope pursuant to Section 2.1, cash equal to $200,000 (the "***Escrow Fund***," and the amounts contained in the Escrow Fund being referred to as the "***Escrow Funds***"). The contents of the Escrow Fund shall be delivered to Bank of America, National Association as escrow agent (the "***Escrow Agent***"). The Escrow Fund shall be held pursuant to the provisions of an escrow agreement substantially in the form of **Exhibit I** (the "***Escrow Agreement***") The Escrow Fund shall be held exclusively by the Escrow Agent.

(b) The Escrow Fund shall be held in the name of the Escrow Agent as collateral to secure the rights of the Cypress Indemnitees under Section 10 hereof for a period of time ending on the date that is 18 months after the Closing Date (the "***Escrow Claim Period***"); *provided, however.*, that in the event any Cypress Indemnitee has timely made a Claim in accordance with the terms of Section 10 that remains unresolved at the end of the Escrow Claim Period, then such claim shall survive the end of the Escrow Claim Period until such time as such

claim is fully and finally resolved. Notwithstanding the foregoing, Indemnification Demands made by Cypress Indemnitees relating to any alleged breach of any of the representations and warranties in Section 3.5 (Intellectual Property) of this Agreement may be made until the earlier of payment of the Milestone Consideration or the Holdback Payment Date; *provided, however,* that in the event any Cypress Indemnitee has timely made a Claim relating to any alleged breach of any of the representations and warranties in Section 3.5 (Intellectual Property) of this Agreement that remains unresolved on the date of the earlier of payment of the Milestone Consideration or the Holdback Payment Date, then such claim shall survive beyond payment of the Milestone Consideration or the Holdback Payment Date, as applicable, until such time as such claim is fully and finally resolved. If on or prior to the expiration of the Escrow Claim Period, any Cypress Indemnitee has made an Indemnification Demand containing a claim which has not been resolved prior to the expiration of the Escrow Claim Period in accordance with Section 10 and the Escrow Agreement, the Escrow Agent shall retain in the Escrow Account after the expiration of the Escrow Claim Period, Escrow Funds having an aggregate value equal to the Asserted Damages Amount or contested portion of the Asserted Damages Amount, as the case may be, with respect to all claims which have not then been resolved. If on or prior to the earlier of the payment of the Milestone Consideration or the Holdback Payment Date, any Cypress Indemnitee has made an Indemnification Demand containing a claim relating to any alleged breach of any of the representations and warranties in Section 3.5 (Intellectual Property) of this Agreement which has not been resolved prior to the earlier of the payment of the Milestone Consideration or the Holdback Payment Date, Cypress shall be entitled to retain after the earlier of the payment of the Milestone Consideration or the Holdback Payment Date, Set-Off Funds having an aggregate value equal to the Asserted Damages Amount or contested portion of the Asserted Damages Amount, as the case may be, with respect to all such claims which have not then been resolved.

(c) In addition to the Escrow Funds, upon the Closing, Cypress shall pursuant to the Innovation Works Agreement withhold from the Closing Consideration otherwise payable to Cellatope pursuant to Section 2.1, an amount of cash equal to $487,100.00 (the "***Innovation Works Holdback***"), In the event that Cypress has not received the IW Holdback Notice (as defined in the Innovation Works Agreement) from Innovation Works prior to the date (the "***Holdback Release Date***") that is four months following the termination of the Reporting Period (as defined in the Innovation Works Agreement), subject to the provisions of the Innovation Works Agreement, Cypress shall pay to Cellatope the Innovation Works Holdback in cash within ten business days after the Holdback Release Date (the "***Holdback Payment Date***").

(d) In the event that this Agreement is approved by Cellatope Stockholders, then all such Cellatope Stockholders shall, without any further act of any Cellatope Stockholder, be deemed to have consented to and approved (i) the use of the Escrow Fund as collateral to secure the rights of the Cypress Indemnitees to be indemnified for Damages under Section 10, as well as the potential set-off against the Annual Payments and the Milestone Consideration by the Cypress Indemnitees (up to the maximum amount set forth in Section 10.2(b)) to secure such rights and provide for such potential Damages, in each case under Section 10 in the manner set forth herein and in the Escrow Agreement and (ii) the withholding of the Innovation Works Holdback from the Closing Consideration for the purpose of making the payment contemplated in the Innovation Works Agreement, which payment would become due and payable to Innovation Works under the circumstances set forth in the Innovation Works Agreement.

3. REPRESENTATIONS AND WARRANTIES OF CELLATOPE.

Except as set forth on a correspondingly numbered section of the Cellatope Disclosure Schedule, Cellatope represents and warrants, as of the date hereof, to and for the benefit of the Cypress Indemnitees, as set forth below. The disclosure in any section or subsection of the Cellatope Disclosure Schedule shall qualify other sections and subsections in this Section 3 only to the extent it is readily apparent that the disclosure contained in such section or subsection of the Cellatope Disclosure Schedule contains enough information regarding the subject matter of the other representations in this Section 3 as to clearly qualify or otherwise clearly apply to such other representations and warranties (including by appropriate cross referencing).

3.1 Due Organization.

(a) Cellatope is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. Cellatope is qualified, authorized, registered or licensed to do business as a foreign corporation in any jurisdiction where its business requires such qualification except where the failure to be so qualified, authorized, registered or licensed would not have a material adverse effect on the Acquired Assets or on the rights or ability of Cypress or any of its Affiliates to own or use the Acquired Assets after Closing. Cellatope has all necessary power and authority: (i) to conduct its business in the manner in which its business is currently being conducted; (ii) to own and use its assets in the manner in which its assets are currently owned and used; and (iii) to perform its obligations under all Cellatope Contracts.

(b) Cellatope has not conducted any business under or otherwise used, for any purpose or in any jurisdiction, any fictitious name, assumed name, trade name or other name, other than the names “Cellatope Corporation” and “StageMark, Inc.”

3.2 Absence of Changes. Except as set forth in Part 3.2 of the Cellatope Disclosure Schedule or otherwise contemplated in this Agreement, since September 30, 2008:

(a) there has not occurred any event, fact or circumstance which has resulted in, or would reasonably be expected to result in, a material adverse effect on the Acquired Assets or the right or ability of Cypress or any of its Affiliates to own or use the Acquired Assets after Closing;

(b) there has not been any loss, damage or destruction to, or any interruption in the use of, any of the Acquired Assets in any material respect; and

(c) Cellatope has not sold or otherwise transferred, or leased, or licensed, any assets (tangible or intangible) relating to the Technology, or agreed to do any of the foregoing (except pursuant to this Agreement).

3.3 Title to Assets.

(a) None of the Acquired Assets is subject to any Encumbrances (including Tax-related Encumbrances) At the Closing Date, Cellatope will transfer to Cypress good and marketable title to all Acquired Assets, free and clear of any Encumbrances.

(b) As of the Closing Date, no Affiliate of Cellatope will own, Control (or otherwise control) or have custody of any Acquired Asset.

(c) Except as contemplated by this Agreement and the Related Agreements, neither Cellatope nor any of its Affiliates has any agreement, absolute or contingent, written or oral, with any other Person to effect any Acquisition Transaction or to sell or otherwise transfer any of the Acquired Assets.

3.4 Equipment, Etc.

(a) All items of equipment and other tangible assets owned by or leased to Cellatope that are included in the Acquired Assets are adequate for the uses to which they are being put and are structurally sound, free of defects and deficiencies and in good condition and repair (ordinary wear and tear excepted).

3.5 Intellectual Property.

(a) Part 3.5(a) of the Cellatope Disclosure Schedule accurately identifies and describes each proprietary product or service included in the Acquired Assets that has been or is under development or was developed, was or is the subject of any regulatory filing, has been or is undergoing pre-clinical or human clinical trials or has been or is being commercially sold by Cellatope (the "***Cellatope Products***").

(b) Part 3.5(b) of the Cellatope Disclosure Schedule accurately identifies, with respect to the Acquired Assets (i) each item of Registered IP in which Cellatope has or purports to have an ownership interest of any nature and the nature of the ownership interest (e.g., exclusively, jointly with another Person, or otherwise); (ii) the jurisdiction in which such item of Registered LP has been registered or filed and the applicable registration or serial number; (iii) any other Person that has an ownership interest in such item of Registered IP and the nature of such ownership interest; and (iv) each product or service identified in Part 3.5(a) of the Cellatope Disclosure Schedule that embodies, utilizes, or is based upon or derived from (or, with respect to products and services under development, that is expected to embody, utilize, or be based upon or derived from) such item of Registered IP. Cellatope has provided to Cypress access to complete and accurate copies of all applications, correspondence, and other material documents related to each such item of Registered IP.

(c) Part 3.5(c) of the Cellatope Disclosure Schedule accurately identifies, with respect to the Acquired Assets (i) all Intellectual Property Rights or Intellectual Property licensed to Cellatope (other than any non-customized software that (A) is so licensed solely in executable or object code form pursuant to a non-exclusive, internal use software license, (B) is not incorporated into, or used directly in the development, manufacturing, or distribution of, any of Cellatope's products or services identified in Part 3.5(a) of the Cellatope Disclosure Schedule, and (C) is generally available on standard terms for less than $5,000); (ii) the corresponding Contract or Contracts pursuant to which such Intellectual Property Rights or Intellectual Property is licensed to Cellatope; and (iii) whether the license or licenses granted to Cellatope are exclusive or non-exclusive.

(d) Part 3.5(d) of the Cellatope Disclosure Schedule accurately identifies each Contract pursuant to which any Person has been granted any license under, or otherwise has received or acquired any right (whether or not currently exercisable) or interest in, any Cellatope IP included in the Acquired Assets. Cellatope is not bound by, and no Cellatope IP is subject to, any Contract containing any covenant or other provision that in any way limits or restricts the ability of Cellatope to use, exploit, assert, or enforce any Cellatope IP included in the Acquired Assets anywhere in the world.

(e) Part 3.5(e) of the Cellatope Disclosure Schedule contains a complete and accurate list and summary of all royalties, fees, commissions, and other amounts payable by Cellatope to any other Person upon or for the manufacture, sale, or distribution of any Cellatope Product or the use of any Cellatope IP.

(f) Cellatope has provided to Cypress a complete and accurate copy of each standard form of Cellatope IP Contract used by Cellatope and relating to any of the Acquired Assets, including each standard form of (i) license agreement; (ii) employee agreement containing intellectual property assignment or license of Intellectual Property or Intellectual Property Rights or any confidentiality provision; (iii) consulting or independent contractor agreement containing intellectual property assignment or license of Intellectual Property or Intellectual Property Rights or any confidentiality provision; and (iv) confidentiality or nondisclosure agreement. Part 3 5(e) of the Cellatope Disclosure Schedule accurately identifies each Cellatope IP Contract relating to any of the Acquired Assets that deviates in any material respect from the corresponding standard form agreement provided to Cypress.

(g) Cellatope exclusively owns all right, title, and interest to and in the Cellatope IP included in the Acquired Assets (other than Intellectual Property Rights or Intellectual Property exclusively licensed to Cellatope, as identified in Part 3.5(c) of the Cellatope Disclosure Schedule) free and clear of any Encumbrances (other than non-exclusive licenses granted pursuant to the Contracts listed in Part 3.5(d) of the Cellatope Disclosure Schedule). Without limiting the generality of the foregoing:

(1) All documents and instruments necessary to perfect the rights of Cellatope in the Cellatope IP included in the Acquired Assets have been validly executed, delivered, and filed in a timely manner with the appropriate Governmental Body.

(2) Each Person who is or was an employee or contractor of Cellatope and who is or was involved in the creation or development of any Cellatope IP included in the Acquired Assets has signed a valid, enforceable agreement containing an assignment of Intellectual Property Rights to Cellatope and confidentiality provisions protecting the Cellatope IP. No current or former stockholder, officer, director, or employee or contractor of Cellatope has any claim, right (whether or not currently exercisable), or interest to or in any Cellatope IP included in the Acquired Assets that has not been validly assigned to Cellatope. No officer or employee of Cellatope is (i) bound by or otherwise subject to any Contract restricting him from performing his duties for Cellatope or (ii) in breach of any Contract with any former employer or other Person concerning Intellectual Property Rights or confidentiality due to his activities as an officer or employee of Cellatope.

(3) Except as set forth on Part 3.5(g) of the Cellatope Disclosure Schedule, no funding, facilities, or personnel of any Governmental Body or any public or private university, college, or other educational or research institution were used, directly or indirectly, to develop or create, in whole or in part, any Cellatope IP included in the Acquired Assets.

(4) Cellatope has taken reasonable steps to maintain the confidentiality of and otherwise protect and enforce its rights in all proprietary information included in the Acquired Assets.

(5) Cellatope has not assigned or otherwise transferred ownership of, or agreed to assign or otherwise transfer ownership of, any Intellectual Property Right included in the Acquired Assets to any other Person.

(6) Cellatope is not now and never was a member or promoter of, or a contributor to, any industry standards body or similar organization that could require or obligate Cellatope to grant or offer to any other Person any license or right to any Cellatope IP included in the Acquired Assets.

(h) To Cellatope's knowledge, all Cellatope IP included in the Acquired Assets is subsisting and enforceable. Without limiting the generality of the foregoing:

(1) Each U.S. patent application and U.S. patent included in the Acquired Assets in which Cellatope has or purports to have an ownership interest was filed within one year of the first printed publication, public use, or offer for sale of each invention described in the U.S. patent application or U.S. patent. Each foreign patent application and foreign patent included in the Acquired Assets in which Cellatope has or purports to have an ownership interest was filed or claims priority to a patent application filed prior to each invention described in the foreign patent application or foreign patent being first made available to the public.

(2) No trademark (whether registered or unregistered) or trade name owned, used, or applied for by Cellatope that is included in the Acquired Assets conflicts or interferes with any trademark (whether registered or unregistered) or trade name owned, used, or applied for by any other Person. None of the goodwill associated with or inherent in any trademark (whether registered or unregistered) included in the Acquired Assets in which Cellatope has or purports to have an ownership interest has been impaired.

(3) Each item of Cellatope IP included in the Acquired Assets that is Registered IP is and at all times has been in all material respects in compliance with all applicable Legal Requirements and all filings, payments, and other actions required to be made or taken to maintain such item of Cellatope IP in full force and effect have been made by the applicable deadline. No application for a patent or a copyright, mask work, or trademark registration or any other type of Registered IP filed by or on behalf of Cellatope that is included in the Acquired Assets has been abandoned, allowed to lapse, or rejected. Part 3.5(h)(3) of the Cellatope Disclosure Schedule accurately identifies and describes each action, filing, and

payment that must be taken or made on or before the date that is ninety (90) days after the Closing Date in order to maintain such item of Cellatope IP in full force and effect.

(4) No interference, opposition, reissue, reexamination, or other proceeding is pending or, to Cellatope's knowledge, threatened, in which the scope, validity, or enforceability of any Cellatope IP included in the Acquired Assets is being, has been, or could reasonably be expected to be contested or challenged. To Cellatope's knowledge, there is no valid basis for a claim that any of such Cellatope IP is invalid or unenforceable.

(i) To Cellatope's knowledge, no Person has infringed, misappropriated, or otherwise violated, and no Person is currently infringing, misappropriating, or otherwise violating, any Cellatope IP included in the Acquired Assets. Part 3.5(i) of the Cellatope Disclosure Schedule accurately identifies (and Cellatope has provided to Cypress a complete and accurate copy of) each letter or other written or electronic communication or correspondence that has been sent or otherwise delivered by or to Cellatope or any Representative of Cellatope regarding any actual, alleged, or suspected infringement or misappropriation of any Cellatope IP included in the Acquired Assets, and provides a brief description of the current status of the matter referred to in such letter, communication, or correspondence.

(j) Neither the execution, delivery, or performance of this Agreement (or any of the Related Agreements) nor the consummation of any of the Transactions will, with or without notice or lapse of time, result in, or give any other Person the right or option to cause or declare, with respect to the Acquired Assets, (a) a loss of, or Encumbrance on, any Cellatope IP included in the Acquired Assets; (b) a breach by Cellatope of any license agreement listed or required to be listed in Part 3.5(c) of the Cellatope Disclosure Schedule or any other Cellatope IP Contract related to the Acquired Assets; (c) the release, disclosure, or delivery of any Cellatope IP included in the Acquired Assets by or to any escrow agent or other Person; or (d) the grant, assignment, or transfer to any other Person of any license or other right or interest under, to, or in any of Cellatope IP included in the Acquired Assets.

(k) To Cellatope's knowledge, Cellatope has never infringed (directly, contributorily, by inducement, or otherwise), misappropriated, or otherwise violated or made unlawful use of any Intellectual Property Right of any other Person.

(i) No claim of infringement or misappropriation, or similar claim or Legal Proceeding involving the Acquired Assets is pending or, to Cellatope's knowledge, threatened against Cellatope or against any other Person who may be entitled to be indemnified, defended, held harmless, or reimbursed by Cellatope with respect to such claim or Legal Proceeding, Cellatope has never received any notice or other communication (in writing or otherwise) relating to any actual, alleged, or suspected infringement, misappropriation, or violation of any Intellectual Property Rights of another Person.

(ii) Cellatope is not bound by any Contract to indemnify, defend, hold harmless, or reimburse any other Person with respect to, or otherwise assumed or agreed to discharge or otherwise take responsibility for, any existing or potential intellectual property infringement, misappropriation, or similar claim related to the Acquired Assets.

(l) To Cellatope's knowledge, no claim or Legal Proceeding involving any Intellectual Property or Intellectual Property Right licensed to Cellatope and included in the Acquired Assets is pending or has been threatened, except for any such claim or Legal Proceeding that, if adversely determined, would not adversely affect (i) the use or exploitation of such Intellectual Property or Intellectual Property Right by Cellatope, or (ii) the development, manufacturing, marketing, distribution, licensing, or sale of any Cellatope Product.

3.6 Contracts.

(a) Cellatope has delivered or made available to Cypress accurate and complete copies of all Acquired Contracts, including all amendments thereto. Each Acquired Contract is valid and in full force and effect and is enforceable against Cellatope in accordance with its terms.

(b) To Cellatope's knowledge, since Cellatope's inception, no Person has violated or breached, or declared or committed any material default under, any Acquired Contract; and no event has occurred, and no circumstance or condition exists, that might (with or without notice or lapse of time) (A) result in a violation or breach of any of the provisions of any Acquired Contract, (B) give any Person the right to declare a default or exercise any remedy under any Acquired Contract, (C) give any Person the right to accelerate the maturity or performance of any Acquired Contract, or (D) give any Person the right to cancel, terminate or materially modify any Acquired Contract. Cellatope has not received any written notice or other written communication regarding any actual, alleged, possible or potential violation or breach of, or default under, any Acquired Contract and has not waived any material right under any Acquired Contract.

(c) Cellatope has not received any written notice or other written communication, or any other written information, or to the knowledge of Cellatope, any oral notice, communication or other information, in each case indicating that any party to any Acquired Contract is insolvent or unable to satisfy all of such Person's current and future monetary obligations and other obligations and Liabilities thereunder.

(d) The performance of the Acquired Contracts by Cellatope has not resulted in any violation of or failure to comply with any Legal Requirement in any material respect.

(e) No party to an Acquired Contract is currently renegotiating the terms of such Acquired Contract with Cellatope, and no such party has the contractual right with Cellatope to renegotiate, any amount paid or payable to Cellatope under any Acquired Contract except as may be expressly permitted by the terms thereof and as set forth in Part 3.6(e) of the Cellatope Disclosure Schedule.

(f) As of the date of this Agreement, Cellatope has no knowledge of any express indication from any party to any Acquired Contract based upon which Cellatope could reasonably be expected to conclude that such party may object to (i) the assignment to Cypress of any right under such Acquired Contract, or (ii) the delegation to or performance by Cypress of any obligation under such Acquired Contract.

(g) Part 3.6(g) of the Cellatope Disclosure Schedule identifies each Consent required from any Person for the legal assignment from Cellatope to Cypress or assumption by Cypress of each Acquired Contract from Cellatope.

3.7 Compliance with Legal Requirements. Cellatope is in full compliance with each Legal Requirement that is applicable to it or to the conduct of its business or the ownership or use of any of its assets, except to the extent any such noncompliance would not reasonably be expected to have a material adverse effect on the Acquired Assets or on the rights or ability of Cypress or any of its Affiliates to own or use the Acquired Assets after Closing. No event has occurred, and no condition or circumstance exists, that could (with or without notice or lapse of time) constitute or result directly or indirectly in a violation by Cellatope of, or a failure on the part of Cellatope to comply with, any Legal Requirement, except to the extent any such noncompliance could not reasonably be expected to have a material adverse effect on the Acquired Assets or on the rights or ability of Cypress or any of its Affiliates to own or use the Acquired Assets after Closing. Cellatope has not received any written notice or other written communication, or any other written information, or to Cellatope's knowledge, any oral notice, communication or other information, at any time, from any Governmental Body or any other Person regarding (i) any actual, alleged, possible or potential violation of, or failure to comply with, any Legal Requirement, or (ii) any actual, alleged, possible or potential obligation on the part of Cellatope to undertake, or to bear all or any portion of the cost of, any cleanup or any remedial, corrective or response action of any nature.

3.8 Governmental Authorizations. Part 3.8 of the Cellatope Disclosure Schedule identifies each Governmental Authorization that is held by Cellatope and is related to the Acquired Assets. Cellatope has delivered to Cypress accurate and complete copies of all of the Governmental Authorizations identified in Part 3.8 of the Cellatope Disclosure Schedule, including all renewals thereof and all amendments thereto. Each Governmental Authorization identified or requited to be identified in Part 3.8 of the Cellatope Disclosure Schedule is valid and in full force and effect. Cellatope is and has at all times been in full compliance with all of the terms and requirements of each Governmental Authorization identified or required to be identified in Part 3.8 of the Cellatope Disclosure Schedule, except to the extent any such noncompliance could not reasonably be expected to have a material adverse effect on the Acquired Assets or on the rights or ability of Cypress or any of its Affiliates to own or use the Acquired Assets after Closing. To Cellatope's knowledge, no event has occurred, and no condition or circumstance exists, that might (with or without notice or lapse of time) (A) constitute or result directly or indirectly in a violation of or a failure to comply with any term or requirement of any Governmental Authorization identified or required to be identified in Part 3.8 of the Cellatope Disclosure Schedule, or (B) result directly or indirectly in the revocation, withdrawal, suspension, cancellation, termination or modification in any material respect of any Governmental Authorization identified or required to be identified in Part 3.8 of the Cellatope Disclosure Schedule. Cellatope has not received any written notice or other written communication (from any Governmental Body or any other Person regarding (A) any actual, alleged, possible or potential violation of or failure to comply with any term or requirement of any Governmental Authorization primarily related to the Acquired Assets, or (B) any actual, proposed, possible or potential revocation, withdrawal, suspension, cancellation, termination or modification in any material respect of any such Governmental Authorization. The Governmental Authorizations identified in Part 3 8 of the Cellatope Disclosure Schedule

constitute all of the Governmental Authorizations necessary to permit Cellatope to own and use the Acquired Assets in the manner in which they are currently owned or used.

3.9 Tax Matters.

(a) To the extent the failure to do so would have a material adverse effect on the Acquired Assets or on the rights or ability of Cypress or any of its Affiliates to own or use the Acquired Assets after Closing or to the extent the failure to do so would result in any liability to Cypress following the Closing, Cellatope (a) has paid all Taxes it is required to pay to the appropriate Governmental Body and (b) has filed all Tax Returns it is required to file.

(b) No Cellatope Return relating to income Taxes has ever been examined or audited by any Governmental Body and there have been no examinations or audits of any Cellatope Return. No extension or waiver of the limitation period applicable to any of the Cellatope Returns has been granted by Cellatope, and no such extension or waiver has been requested in writing from Cellatope.

(c) There are no Legal Proceedings pending or, to Cellatope's knowledge, threatened against or with respect to Cellatope in respect of any Tax. There are no unsatisfied liabilities for Taxes (including Liabilities for interest, additions to tax and penalties thereon and related expenses) with respect to any notice of deficiency or similar document received by Cellatope with respect to any Tax. There are no liens for Taxes upon any of the assets of Cellatope except liens for current Taxes not yet delinquent or for Taxes being contested in good faith.

(d) Cellatope has withheld, collected, deposited or paid all Taxes required to have been withheld, collected, deposited or paid, as the case may be, in connection with amounts paid or owing to any employee, independent contractor, creditor or stockholder.

(e) No jurisdiction in which Cellatope does not file Tax Returns has ever asserted that Cellatope may be required to file a Tax Return in such jurisdiction.

3.10 Labor Matters. To Cellatope's knowledge, except as set forth on Part 3.10 of the Cellatope Disclosure Schedule, no officer, employee or consultant of Cellatope is obligated under any Contract or subject to any Order or Legal Requirement that relates in any respect to the Acquired Assets or the work performed by such officer, employee or consultant with respect to the Acquired Assets prior to the Closing.

3.11 Affiliate Transactions. Except as set forth on Part 3.11 of the Cellatope Disclosure Schedule, no Affiliate of Cellatope: (a) has any direct or indirect proprietary interest of any nature in any of the Acquired Assets; (b) has entered into, or has any direct or indirect financial interest in, any Acquired Contract; or (c) has any claim or right against the Acquired Assets. To Cellatope's knowledge, no event has occurred, and no condition or circumstance exists, that could (with or without notice or lapse of time) give rise to or serve as a basis for any claim or right in favor of any Affiliate of Cellatope against the Acquired Assets.

3.12 Legal Proceedings; Orders. There is no pending Legal Proceeding, and, to Cellatope's knowledge, no Legal Proceeding is being threatened against Cellatope or any of its

officers or directors in their capacity as such and no event has occurred, and no claim, dispute or other condition or circumstance exists, that could reasonably be expected to give rise to or serve as a basis for the commencement of any such Legal Proceeding. There is no Order to which Cellatope, or any of the Acquired Assets is subject; and none of the Affiliates of Cellatope is subject to any Order that relates to the Acquired Assets.

3.13 Authority; Binding Nature of Agreement.

(a) Subject to obtaining the requisite approval of Cellatope's stockholders in accordance with the DGCL and its certificate of incorporation and bylaws, Cellatope has the absolute and unrestricted right, power and authority to enter into and to perform its obligations under this Agreement and any Related Agreement to which it is a party; and the execution, delivery and performance by Cellatope of this Agreement and any Related Agreement to which it is a party have been duly authorized by all necessary action on the part of Cellatope and its board of directors. The prior written consent or affirmative vote of the holders of at least (1) 66 2/3% of the shares of Cellatope's Series B Preferred Stock, (2) a majority of the shares of Cellatope's Series A Preferred Stock and (3) a majority of the shares of Cellatope's common stock, outstanding as of the close of business on the date on which the Cellatope board of directors approves the principal terms of this Agreement and the Transactions (the "***Board Approval Date***") (or such other date as Cellatope's board of directors sets as the record date for stockholders to approve this Agreement and the Transactions) are the only consents or approvals of the stockholders of Cellatope needed to approve the principal terms of this Agreement and to approve the Transactions (the "***Required Cellatope Stockholder Approval***"). This Agreement and each Related Agreement that has been executed and delivered by Cellatope has been duly executed and delivered by Cellatope, and assuming due authorization, execution and delivery by the other parties thereto, constitutes the legal, valid and binding obligation of Cellatope, enforceable against Cellatope in accordance with its terms, subject to (i) laws of general application relating to bankruptcy, insolvency and the relief of debtors, and (ii) rules of law governing specific performance, injunctive relief and other equitable remedies.

(b) The affirmative vote of the shares of Cellatope Capital Stock subject to the Voting Agreements are sufficient, and as of the Board Approval Date (or such other date as Cellatope's board of directors sets as the record date for stockholders to approve this Agreement and the Transactions) will be sufficient, without the affirmative vote of holders of any additional shares of Cellatope Capital Stock, to obtain the Required Cellatope Stockholder Approval.

3.14 Non-Contravention; Consents. Neither the execution and delivery of this Agreement or any of the Related Agreements to which Cellatope is a party by Cellatope, nor the consummation or performance of any of the Transactions by Cellatope (assuming receipt of the Required Cellatope Stockholder Approval and execution and delivery of the Innovation Works Agreement and the Amended Pittsburgh License), will directly or indirectly (with or without notice or lapse of time):

(a) give any Governmental Body or other Person the right to challenge any of the Transactions or to exercise any remedy or obtain any relief under, any Legal Requirement or any Order to which Cellatope or any Affiliate of Cellatope, or any of the Acquired Assets, is

subject, including by revoking, withdrawing, suspending, cancelling, terminating or modifying any Governmental Authorization that is included in the Acquired Assets;

(b) contravene or result in a violation of the certificate of incorporation or bylaws of Cellatope;

(c) contravene, conflict with or result in a violation or breach of, or result in a default under, (i) any provision of any Acquired Contract or (ii) any other Contract of Cellatope, in the case of clause (ii) of this Section 3.14(c), solely to the extent such contravention, violation or breach could reasonably be expected to prevent, enjoin, alter or delay the Transactions;

(d) result in the imposition or creation of any Encumbrance upon or with respect to any of the Acquired Assets; or

(e) require any filing with or notice to, or Consent from, any Person.

3.15 Regulatory Compliance.

(a) No Cellatope Products being developed are subject to the jurisdiction of the FDA, the Food and Drug and Cosmetic Act, the Public Health Service Act, their applicable implementing regulations or any comparable state laws and regulations.

(b) Cellatope has not conducted any clinical or pre-clinical trials with respect to any Cellatope Products.

(c) None of the manufacturing operations conducted by or for the benefit of Cellatope with respect to the Cellatope Products that have been or are being conducted are subject to the FDA's current Good Clinical Practices regulations and Good Laboratory Practices regulations for drug and biological products. In addition, Cellatope is not subject to any of the registration or listing requirements set forth in 21 U.S.C. Section 360 and 21 CFR Part 207 or any similar applicable Legal Requirements with respect to the Acquired Assets.

(d) No animal studies, preclinical tests or human clinical trials have been performed in connection with or as the basis for any regulatory approval required for Cellatope Products.

(e) Cellatope has provided Cypress with copies of all notices of inspectional observations, establishment inspection reports and any other documents received from Governmental Bodies and related to any of the Cellatope Products, that indicate or suggest lack of compliance with the regulatory requirements of such Governmental Bodies. Cellatope has made available to Cypress for review all correspondence to or from all Governmental Bodies, minutes of meetings, written reports of phone conversations, visits or other contact with Governmental Bodies, notices of inspectional observations, establishment inspection reports, and all other documents concerning communications to or from Governmental Bodies, or prepared by or which bear in any way on Cellatope's compliance with regulatory requirements of Governmental Bodies with respect to the Cellatope Products, or on the likelihood of timing of approval of any Cellatope Products.

3.16 Finder's Fee. No broker, finder or investment banker or other Person is entitled to any brokerage, finder's, success or other fee or commission in connection with the consummation of this Agreement or any of the Transactions based upon arrangements made by or on behalf of Cellatope.

3.17 Full Disclosure. This Agreement and the Cellatope Disclosure Schedule do not (i) contain any representation, warranty or information that is false or misleading with respect to any material fact, or (ii) omit to state any material fact necessary in order to make the representations, warranties and information contained herein and therein, in the light of the circumstances under which such representations, warranties and information were or are made or provided, not false or misleading.

3.18 Agreements with Innovation Works. Other than Agreement Numbers 2004W.CB01223R-1 dated June 1, 2005, 2004W.CB01223R-2 dated October 19, 2005, 2005W.CC01245R-1 dated May 8, 2006, 2006W.CB01223R-3 dated October 17, 2006 and 2006W.CB01223R-4 dated March 21, 2007 between Cellatope and Innovation Works and as set forth on Part 3.18 to the Cellatope Disclosure Schedule, there are no funding or financing agreements or agreements of any kind in force between Cellatope and Innovation Works.

3.19 Cellatope's Knowledge. Cellatope has caused each of Joseph Ahearn, M.D., Daniel Graziano, Albert D, Donnenberg, Ph.D., Edward L. Erickson and Lorraine G. LoPresti to make due inquiry of each fact or matter with respect to which Cellatope has made any representation or warranty herein that is qualified by Cellatope's knowledge.

4. REPRESENTATIONS AND WARRANTIES OF CYPRESS.

Except as set forth on a correspondingly numbered section of the Cypress Disclosure Schedule, Cypress represents and warrants, as of the date hereof, to and for the benefit of Cellatope, as set forth below. The disclosure in any section or subsection of the Cypress Disclosure Schedule shall qualify other sections and subsections in this Section 4 only to the extent it is readily apparent that the disclosure contained in such section or subsection of the Cypress Disclosure Schedule contains enough information regarding the subject matter of the other representations in this Section 4 as to clearly qualify or otherwise clearly apply to such other representations and warranties (including by appropriate cross referencing).

4.1 Due Organization. Cypress is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. Cypress is qualified, authorized, registered or licensed to do business as a foreign corporation in any jurisdiction where its business requires such qualification except where the failure to be so qualified, authorized, registered or licensed would not have a material adverse effect on Cypress' business or operations. Cypress has all necessary power and authority to conduct its business in the manner in which its business is currently being conducted and to own and use its assets in the manner in which its assets are currently owned and used.

4.2 Authority; Binding Nature Of Agreements. Cypress has the corporate power and authority to enter into and perform its obligations under each of this Agreement and the Related Agreements to which it is a party, and the execution and delivery and performance by

Cypress of each of this Agreement and the Related Agreements to which it is a party has been duly authorized by all necessary corporate action on the part of Cypress. This Agreement and each Related Agreement to which it is a party constitutes the legal, valid and binding obligation of Cypress, enforceable against it in accordance with its terms, subject to any applicable bankruptcy, insolvency, reorganization, moratorium or similar laws now or hereinafter in effect relating to creditors' rights generally or to general principles of equity.

4.3 Governmental and Other Authorizations. The execution, delivery and performance by Cypress of this Agreement and the Related Agreements, and the consummation by it of the Transactions, require no filings with or notices to or approvals of any Governmental Body on the part of Cypress or any material consent, waiver or approval of any other Person, other than a Governmental Body, on the part of Cypress, except where the failure to obtain such waivers, consents or approvals or to make such filings or give such notice would not have a material adverse effect on Cypress' business or operations.

4.4 Non-Contravention. Neither the execution and delivery of this Agreement or any of the Related Agreements by Cypress, nor the consummation or performance of any of the Transactions by Cypress, will directly or indirectly (with or without notice or lapse of time):

(a) contravene, or result in a violation of, or give any Governmental Body or other Person the right to challenge any of the Transactions;

(b) contravene, conflict with or result in a violation of the certificate of incorporation or bylaws of Cypress; or

(c) contravene or result in a violation or breach of any Contract of Cypress, solely to the extent such contravention, violation or breach could reasonably be expected to prevent, enjoin, alter or delay the Transactions.

4.5 Litigation; Compliance with Legal Requirements. There is no pending Legal Proceeding, and, to Cypress' Knowledge, no Person has threatened in writing to commence any Legal Proceeding against Cypress or any of its Affiliates that challenges, or that could have the effect of preventing, delaying, making illegal or otherwise interfering with, any of the Transactions.

5. CERTAIN COVENANTS OF CELLATOPE AND CYPRESS.

5.1 Access and Investigation. Except as may be reasonably appropriate to ensure compliance with respect to any applicable Legal Requirements (including, without limitation, any applicable antitrust regulations), and subject to any confidentiality obligations or applicable privileges (including, without limitation, the attorney-client privilege), during the Pre-Closing Period, Cellatope will give Cypress and its Representatives reasonable access to its Representatives, the Acquired Assets and the existing books, records, work papers and other documents and information relating to the Acquired Assets as Cypress may reasonably request during normal business hours and upon reasonable prior notice, all for the purpose of enabling Cypress and its Representatives to conduct, at their own expense, business reviews and investigations of the Acquired Assets.

5.2 Operation of Cellatope's Business.

(a) Except as otherwise expressly contemplated by this Agreement and the Related Agreements, Cellatope shall use its commercially reasonable efforts to ensure that, during the Pre-Closing Period, Cellatope conducts its operations (A) exclusively in the ordinary course of business and consistent with past practices and in substantially the same manner as such operations have been conducted prior to the date of this Agreement and (B) in compliance with all applicable material Legal Requirements and in compliance with the requirements of all Acquired Contracts.

(b) During the Pre-Closing Period, except as expressly contemplated by this Agreement, Cellatope shall not (without the prior written consent of Cypress):

(i) commence or settle any Legal Proceeding affecting the Acquired Assets;

(ii) become a party to or authorize any Acquisition Transaction;

(iii) adopt a plan of complete or partial liquidation or dissolution or resolutions providing for or authorizing such a liquidation or dissolution (other than such plans as shall be expressly conditioned on the occurrence of the Closing, to take effect from and after such time);

(iv) sell or otherwise dispose of, or lease or license, any Acquired Asset to any Person, or waive or relinquish any right included in the Acquired Assets;

(v) take any action (or fail to take any action) that could reasonably be expected to (with or without notice or lapse of time) result in a violation, breach or default of any of the provisions of any Acquired Contract;

(vi) enter into any material transaction or take any other material action outside the ordinary course of business and inconsistent with past practices that affects the Acquired Assets (other than the actions required to be taken under this Agreement or that are consistent with the Transactions); or

(vii) authorize, agree, commit or enter into any agreement to take any of the actions described in clauses "(i)" through "(vi)" of this Section 5.2(b).

5.3 Stockholder Approval.

(a) As soon as practicable after the date hereof, Cellatope shall take all action necessary under Cellatope's certificate of incorporation and bylaws and all applicable Legal Requirements to submit this Agreement, the Related Agreements (if applicable) and the Transactions to the stockholders of Cellatope for approval via written stockholder consent. Cellatope will prepare and distribute to Cellatope's stockholders in connection with the solicitation of the Required Cellatope Stockholder Approval an information statement (the "***Cellatope Information Statement***") in compliance with all applicable Legal Requirements and Cellatope's certificate of incorporation and bylaws. Cellatope shall (i) solicit from stockholders

of Cellatope in compliance with applicable Legal Requirements and Cellatope's certificate of incorporation and bylaws written consents to approve this Agreement and the Transactions and (ii) use its commercially reasonable efforts to obtain the Required Cellatope Stockholder Approval as soon as reasonably possible following the execution of this Agreement.

(b) The board of directors of Cellatope unanimously recommended that Cellatope's stockholders vote to approve this Agreement and the Transactions (the "***Recommendation***"). The Cellatope Information Statement shall include the Recommendation. Neither the board of directors of Cellatope nor any committee thereof shall withdraw, amend or modify, or propose or resolve to withdraw, amend or modify, in a manner adverse to Cypress, the Recommendation. For purposes of this Agreement, the Recommendation shall be deemed to have been modified in a manner adverse to Cypress if such Recommendation shall no longer be unanimous.

6. ADDITIONAL COVENANTS OF THE PARTIES.

6.1 Filings and Consents; Additional Agreements. As promptly as practicable after the execution of this Agreement, each party to this Agreement (a) shall make all filings (if any) and give all notices (if any) required to be made and given by such party in connection with the Transactions, and (b) shall use all commercially reasonable efforts to obtain all Consents (if any) required to be obtained (pursuant to any applicable Legal Requirement or Contract, or otherwise) by such party in connection with the Transactions. Cellatope shall (upon request) promptly deliver to Cypress a copy of each such filing made, each such notice given and each such Consent obtained by Cellatope during the Pre-Closing Period. Cypress shall (upon request) promptly deliver to Cellatope a copy of each such filing made, each such notice given and each such Consent obtained by Cypress during the Pre-Closing Period. In addition, Cypress and Cellatope shall use commercially reasonable efforts (y) to cause the conditions set forth in Section 7, in the case of Cellatope, and in Section 8, in the case of Cypress, to be satisfied as soon as practicable prior to the Termination Date and (z) to take, or cause to be taken, all actions necessary to consummate the Transactions as soon as practicable prior to the Termination Date.

6.2 Notification. During the Pre-Closing Period, each party shall promptly notify the other in writing of, and shall subsequently keep such other party updated on a current basis regarding: (a) the discovery of any event, condition, fact or circumstance that occurred or existed on or prior to the date of this Agreement and that caused or constitutes a breach of any representation or warranty made in this Agreement; (b) any event, condition, fact or circumstance that occurs, arises or exists after the date of this Agreement and that would cause or constitute a breach of any representation or warranty made in this Agreement if (i) such representation or warranty had been made as of the time of the occurrence, existence or discovery of such event, condition, fact or circumstance, or (ii) such event, condition, fact or circumstance had occurred, arisen or existed on or prior to the date of this Agreement; (c) any breach of any covenant or obligation; and (d) any event, condition, fact or circumstance that could reasonably be expected to make the timely satisfaction of any of the conditions set forth in Section 7 or Section 8 impossible or unlikely.

6.3 No Negotiation. Cellatope shall ensure that, during the Pre-Closing Period, neither it nor any of its Representatives, directly or indirectly: (a) solicits or encourages the

initiation of any inquiry, proposal or offer from any Person (other than Cypress) related to an Acquisition Transaction; (b) participates in any discussions or negotiations with or enters into any agreement with, or provides any information to, any Person (other than Cypress) relating to an Acquisition Transaction; or (c) considers the merits of any unsolicited inquiry, proposal or offer from any Person (other than Cypress) relating to an Acquisition Transaction. Cellatope shall immediately cease and cause to be terminated any Contract or discussions with any Person (other than Cypress) related to an Acquisition Transaction.

6.4 Public Announcements. During the Pre-Closing Period, Cypress shall not (and Cypress shall not permit any Representative of Cypress to) issue any press release or make any public statement regarding this Agreement, the Related Agreements or the Transactions, without Cellatope's prior written consent, *provided, however,* that nothing herein shall be deemed to prohibit Cypress from making any public disclosure Cypress deems necessary or appropriate under applicable Legal Requirements, *provided* Cypress, if in its exercise of reasonable diligence has sufficient time to do so, has provided Cellatope a copy of any proposed public disclosure. Cellatope shall not (and Cellatope shall not permit any Representative of Cellatope to) issue any press release or make any public statement regarding this Agreement, the Related Agreements or the Transactions, without Cypress' prior written consent.

6.5 Further Actions.

(a) From and after the Closing Date, Cellatope shall, and shall cause its Affiliates to, cooperate with Cypress and Cypress' Affiliates and Representatives, and shall execute and deliver such documents and take such other actions as Cypress may reasonably request, for the purpose of evidencing the Transactions and putting Cypress in possession and control of all of the Acquired Assets.

(b) From and after the Closing Date, Cellatope shall, and shall cause its Affiliates to, reasonably cooperate with Cypress in its efforts to continue and maintain for the benefit of Cypress those business relationships of Cellatope existing prior to the Closing Date and related to or involving any of the Acquired Assets, including relationships with lessors, licensors, suppliers, vendors and others. Neither Cellatope nor any of its Affiliates or its or their Representatives shall take any action after the Closing Date which would reasonably be expected to diminish the value of the Acquired Assets, and neither Cellatope nor any of its Affiliates will satisfy any of the Excluded Liabilities in a manner reasonably likely to be detrimental to such relationships, individually or as a whole.

(c) Cellatope and Cypress will cooperate in good faith in connection with the filing of Tax Returns, any audit or Legal Proceeding with respect to Taxes and in connection with any other Legal Proceeding in each case relating to the Acquired Assets, as and to the extent reasonably requested by Cypress or Cellatope. Such cooperation shall include (i) Cellatope, upon reasonable notice and during normal business hours, providing access to Cypress and its Representatives to the books and records relating to the Acquired Assets, (ii) the retention and (upon a party's request, but subject, in each case, to neither Cellatope nor Cypress being obligated to provide any records or information in the event that doing so could reasonably be expected to result in a waiver of any applicable attorney-client privilege) the provision of records and information which are reasonably relevant to the preparation of Tax Returns or to any such

Legal Proceeding and (iii) making relevant employees available on a mutually convenient basis to provide additional information and explanation of any material provided hereunder. Cellatope and Cypress shall (iv) retain all records with respect to Tax matters pertinent to the Acquired Assets relating to any period beginning before the Closing Date until the expiration of all relevant statutes of limitations (and, to the extent notified by Cellatope or Cypress, any extensions thereof), and abide by all record retention agreements entered into with any Governmental Body with respect to Taxes (with respect to agreements of another party, to the extent notified thereof) and (v) give the other party to this Agreement reasonable written notice prior to transferring, destroying or discarding any such records.

6.6 Access to Records After the Closing. Except as may be reasonably appropriate to ensure compliance with respect to any applicable Legal Requirements (including, without limitation, any applicable antitrust regulations), and subject to any confidentiality obligations or applicable privileges (including, without limitation, the attorney-client privilege), for a period of two years after the Closing Date, Cypress and its Representatives shall have reasonable access, during normal business hours and at Cypress' expense, to any reasonably available books, records, work papers and other documents and information relating to the Acquired Assets as Cypress may reasonably request.

6.7 Taxes. In the case of any real or personal property Taxes or any similar Taxes attributable to the Acquired Assets which Taxes are reported on a Tax Return covering a period commencing before the Closing Date and ending thereafter (a "***Straddle Period Tax***"), any such Straddle Period Taxes shall be prorated between Cellatope and Cypress on a per diem basis. The party required to pay any such Straddle Period Tax as required by law (the "***Paying Party***") shall provide the other party (the "***Non-Paying Party***") with a proof of payment and within 10 days of receipt of such proof of payment, the Non-Paying Party shall reimburse the Paying Party for its share of such Straddle Period Taxes. The party required to file a Tax Return with respect to Straddle Period Taxes shall do so within the time period prescribed by law.

7. CONDITIONS PRECEDENT TO OBLIGATIONS OF CYPRESS.

The obligations of Cypress to consummate the Transactions are subject to the satisfaction or written waiver by Cypress, at or prior to the Closing, of each of the following conditions:

7.1 Accuracy of Representations. Each of the representations and warranties made by Cellatope in this Agreement in connection with the Transactions shall have been accurate in all material respects as of the date of this Agreement (without giving double effect to any materiality qualifications), and shall be accurate in all material respects as of the Closing Date as if made on the Closing Date (without giving double effect to any materiality qualifications).

7.2 Performance of Covenants. All of the covenants and obligations that Cellatope is required to comply with or to perform at or prior to the Closing, considered individually and in the aggregate, shall have been complied with and performed in all material respects.

7.3 Stockholder Approval. This Agreement, the Related Agreements (to the extent applicable) and the Transactions shall have been duly approved by the Required Cellatope Stockholder Approval.

7.4 Consents. All Consents required to be obtained by Cellatope in connection with the Transactions (including the Consents identified in Part 3.14 of the Cellatope Disclosure Schedule) from any Person or Governmental Body shall have been obtained, shall be in full force and effect and all relevant statutory, regulatory or other governmental waiting periods, if any, whether domestic, foreign or supranational shall have expired.

7.5 Agreements and Documents. Cypress shall have received the following agreements and documents, each of which shall be in full force and effect:

(1) the Escrow Agreement, executed by the Escrow Agent and Cellatope;

(ii) the General Assignment and Assumption Agreement substantially in the form of **Exhibit J**, executed by Cellatope;

(iii) the Bill of Sale substantially in the form of **Exhibit K**, executed by Cellatope;

(iv) the Assignment of Patent Rights and the Assignment of Co-Owned Patent Rights substantially in the forms of **Exhibit F** and **Exhibit G**, respectively, executed by Cellatope;

(v) a certificate signed on behalf of Cellatope by the President of Cellatope representing and warranting that the conditions set forth in Section 7.1, Section 7.2, and Section 7.4 have been duly satisfied (the "***Cellatope Compliance Certificate***");

(vi) a certificate, dated as of the Closing Date, signed by the Secretary of Cellatope (i) attaching true and correct copies of the certificate of incorporation and bylaws, and any amendments thereto, of Cellatope, (ii) certifying that attached thereto are true and correct copies of actions by written consent or resolutions duly approved by the board of directors and stockholders of Cellatope which authorize and approve the execution, delivery and performance of this Agreement and the consummation of the Transactions, (iii) certifying that there are no proceedings for the dissolution or liquidation of Cellatope other than such proceedings pursuant to a plan of dissolution and liquidation approved by the Board of Directors of Cellatope which shall by its terms not be effective until after the Closing shall have occurred and (iv) certifying the incumbency, signature and authority of the officers of Cellatope authorized to execute, deliver and perform this Agreement and all Related Agreements executed or to be executed by Cellatope;

(vii) the Voting Agreement, executed by the Cellatope stockholders who are party thereto;

(viii) the Assignment of Trademarks substantially in the form of **Exhibit 0**, executed by Cellatope; and

(ix) the amendment to that certain Exclusive License Agreement dated October 14, 2005 between StageMark, Inc. (now Cellatope) and the University of Pittsburgh of the Common Wealth System of Higher Education (the "***University of Pittsburgh***"), as amended

on or about May 25, 2006, and March 21, 2007 (the "***Pittsburgh License***"), which amendment shall be executed by Cypress, Cellatope and the University of Pittsburgh and will become effective immediately following the Closing (the Pittsburgh License, as amended by the further amendment described in this Section 7.5(ix), is referred to herein as the "***Amended Pittsburgh License***").

7.6 No Material Adverse Effect. There shall not have occurred since the date of this Agreement any event, fact or circumstance which has resulted in, or would reasonably be expected to result in, a material adverse effect on the Acquired Assets or the right or ability of Cypress or any of its Affiliates to own or use the Acquired Assets after Closing.

7.7 No Restraints. No temporary restraining order, preliminary or permanent injunction or other Order preventing the consummation of the Transactions shall have been issued by any Governmental Body and remain in effect, and there shall not be any Legal Requirement enacted or deemed applicable to the Transactions that makes consummation of the Transactions illegal.

7.8 No Governmental Litigation. There shall not be pending or threatened any Legal Proceeding in which a Governmental Body is or is threatened to become a party or is otherwise involved, and neither Cellatope nor Cypress shall have received any communication from any Governmental Body in which such Governmental Body indicates the possibility of commencing any Legal Proceeding or taking any other action: (a) challenging or seeking to restrain or prohibit the consummation of the Transactions; (b) relating to the Transactions and seeking to obtain from Cypress or any of its Affiliates any damages or other relief that may be material; or (c) which could reasonably be expected to materially and adversely affect the Transactions or the right or ability of Cypress or any of its Affiliates to own or use the Acquired Assets after the Closing.

7.9 No Other Litigation. There shall not be pending any Legal Proceeding in which, in the reasonable judgment of Cypress, there is a reasonable possibility of an outcome that could reasonably be expected to have a material adverse effect on the Transactions or the right or ability of Cypress or any of its Affiliates to own or use the Acquired Assets after Closing,

7.10 Consultant Matters. Each of Edward L. Erickson and Dennis Graziano shall have entered into a Consulting Agreement in substantially the form attached hereto as **Exhibit B** (including a Proprietary Information Assignment Agreement attached as an exhibit thereto), which Consulting Agreements shall become effective immediately following the Closing, and neither Edward L. Erickson nor Dennis Graziano shall have made any indication to Cypress, Cellatope or any of their Representatives that any such Person has a present intent to terminate such contractual relationship.

7.11 Innovation Works Agreement. The Innovation Works Agreement shall have been executed and delivered by the parties thereto and remain in full force and effect,

7.12 No Encumbrances. Cellatope shall have delivered evidence, reasonably satisfactory to Cypress, that all Encumbrances identified by Cypress prior to the Closing and relating to any of the Acquired Assets have been removed.

8. CONDITIONS PRECEDENT TO OBLIGATIONS OF CELLATOPE.

Cellatope's obligation to sell and transfer the Acquired Assets and to take the other actions required to be taken by Cellatope at the Closing is subject to the satisfaction, at or prior to the Closing, of each of the following conditions (any of which may be waived by Cellatope, in whole or in part, in writing):

8.1 Accuracy of Representations. Each of the representations and warranties made by Cypress in this Agreement in connection with the Transactions shall have been accurate in all material respects as of the date of this Agreement (without giving double effect to any materiality qualifications), and shall be accurate in all material respects as of the Closing Date as if made on the Closing Date (without giving double effect to any materiality qualifications).

8.2 Performance of Covenants. All of the covenants and obligations that Cypress is required to comply with or to perform at or prior to the Closing shall have been complied with and performed in all material respects.

8.3 Documents. Cellatope shall have received (a) a certificate signed on behalf of Cypress by an executive officer of Cypress representing and warranting that the conditions set forth in Section 8.1, Section 8.2, and Section 8.7 have been duly satisfied, (b) the Escrow Agreement, executed by the Escrow Agent and Cypress, (c) the Innovation Works Agreement executed by Cypress and Innovation Works, (d) the Amended Pittsburgh License, executed by Cypress and the University of Pittsburgh, (e) the General Assignment and Assumption Agreement executed by Cypress, (f) the Assignment of Patent Rights, executed by Cypress, (g) the Assignment of Co-Owned Patent Rights, executed by Cypress and (h) the Assignment of Trademarks, executed by Cypress. Each of the agreements listed in subsections (b) through (h) of this Section 8.3 shall be in full force and effect.

8.4 No Restraints. No temporary restraining order, preliminary or permanent injunction or other Order preventing the consummation of the Transactions shall have been issued by any Governmental Body and remain in effect, and there shall not be any Legal Requirement enacted or deemed applicable to the Transactions that makes the consummation of the Transactions illegal.

8.5 No Governmental Litigation. There shall not be pending or threatened any Legal Proceeding in which a Governmental Body is or is threatened to become a party or is otherwise involved, and neither Cellatope nor Cypress shall have received any communication from any Governmental Body in which such Governmental Body indicates the possibility of commencing any Legal Proceeding or taking any other action: (a) challenging or seeking to restrain or prohibit the consummation of the Transactions; and (b) which could reasonably be expected to materially and adversely affect the Transactions or the right of Cellatope to receive the consideration set forth in Section 2.

8.6 Stockholder Approval. This Agreement, the Related Agreements (to the extent applicable) and the Transactions shall have been duly approved by the Required Cellatope Stockholder Approval.

8.7 Consents. All Consents, if any, required to be obtained by Cypress in connection with the Transactions from any Person or Governmental Body shall have been obtained (other than Consents which, pursuant to the terms of this Agreement, shall be obtained by Cypress following the Closing), shall be in full force and effect and all relevant statutory, regulatory or other governmental waiting periods, if any, whether domestic, foreign or supranational shall have expired.

8.8 Payment of Closing Consideration. Cypress shall have delivered to Cellatope the Closing Consideration (subject to the terms of Sections 2.1 and 2 3).

9. TERMINATION.

9.1 Termination Events. This Agreement may be terminated prior to the Closing:

(a) by mutual written consent of Cypress and Cellatope;

(b) by either Cypress or Cellatope, if any Order by any Governmental Body of competent jurisdiction preventing or prohibiting consummation of the Transactions shall have become final and nonappealable; *provided, however*, that the party seeking to terminate this Agreement pursuant to this Section 9.1(b) must have used all reasonable efforts to remove any such Order;

(c) by Cypress if, within five business days of the date of execution of this Agreement the Required Cellatope Stockholder Approval shall not have been obtained;

(d) by Cypress if any of Cellatope's representations and warranties contained in this Agreement shall have been materially inaccurate as of the date of this Agreement or shall have become materially inaccurate as of any subsequent date (as if made on such subsequent date), or if any of Cellatope's covenants contained in this Agreement shall have been breached in any material respect; *provided, however*, that Cypress may not terminate this Agreement under this Section 9.1(d) on account of an inaccuracy in Cellatope's representations and warranties or on account of a breach of a covenant by Cellatope if such inaccuracy or breach is curable by Cellatope unless Cellatope fails to cure such inaccuracy or breach within 5 days after receiving written notice from Cypress of such inaccuracy or breach;

(e) by Cellatope if any of Cypress' representations and warranties contained in this Agreement shall have been materially inaccurate as of the date of this Agreement or shall have become materially inaccurate as of any subsequent date (as if made on such subsequent date), or if any of Cypress' covenants contained in this Agreement shall have been breached in any material respect; *provided, however*, that Cellatope may not terminate this Agreement under this Section 9.1(e) on account of an inaccuracy in Cypress' representations and warranties or on account of a breach of a covenant by Cypress if such inaccuracy or breach is curable unless Cypress fails to cure such inaccuracy or breach within 5 days after receiving written notice from Cellatope of such inaccuracy or breach; or

(f) by Cypress or Cellatope if the Closing has not taken place on or before February 23, 2009 (the "***Termination Date***") (other than as a result of any failure on the part of

the party attempting to terminate this Agreement to comply with or perform any of its covenants or obligations set forth in this Agreement).

9.2 Termination Procedures. If either party wishes to terminate this Agreement pursuant to Section 9.1, it shall deliver to the other party a written notice stating that it is terminating this Agreement and setting forth a brief description of the basis on which it is terminating this Agreement.

9.3 Effect of Termination. If this Agreement is terminated pursuant to Section 9.1, all further obligations of the parties under this Agreement shall terminate; *provided, however,* that: (a) neither Cellatope nor Cypress shall be relieved of any obligation or liability arising from any inaccuracy or prior breach by such party of any representation, warranty, covenant or other provision of this Agreement and (b) the parties shall, in all events, remain bound by and continue to be subject to the provisions set forth in Section 11.

10. INDEMNIFICATION, ETC.

10.1 Survival of Representations, Etc.

(a) The representations and warranties made by Cellatope in this Agreement (including the Cellatope Disclosure Schedule), Cellatope Compliance Certificate or in the certificate provided pursuant to Section 7.5(vi) shall survive the Closing and expire at the termination of the Escrow Claim Period; *provided, however*, that (A) if, at any time prior to the end of the Escrow Claim Period, any Cypress Indemnitee delivers to Cellatope a written notice alleging the existence of an inaccuracy in or a breach of any of the representations and warranties made by Cellatope for which the Escrow Claim Period has not expired (and setting forth in reasonable detail the basis for such Cypress Indemnitee's belief that such an inaccuracy or breach may exist) and asserting a claim for recovery under Section 10.2 based on such alleged inaccuracy or breach, then the representation or warranty underlying the claim asserted in such notice shall survive the end of the Escrow Claim Period until such time as such claim is fully and finally resolved, for the sole purpose of remaining in effect in order to permit such claim to be fully and finally resolved; and (B) the representations and warranties in Section 3.5 (Intellectual Property) shall survive until the earlier of the payment of the Milestone Consideration or the Holdback Payment Date; *provided, however*, that if, at any time prior to the earlier of the payment of the Milestone Consideration or the Holdback Payment Date, any Cypress Indemnitee delivers to Cellatope a written notice alleging the existence of an inaccuracy in or a breach of any of the representations and warranties made by Cellatope in Section 3.5 (Intellectual Property) (and setting forth in reasonable detail the basis for such Cypress Indemnitee's belief that such an inaccuracy or breach may exist) and asserting a claim for recovery based on such alleged inaccuracy or breach, then the representation or warranty underlying the claim asserted in such notice shall survive the earlier of the payment of the Milestone Consideration or the Holdback Payment Date until such time as such claim is fully and finally resolved, for the sole purpose of remaining in effect in order to permit such claim to be fully and finally resolved. All representations and warranties made by Cypress shall survive the Closing and expire at the termination of the Escrow Claim Period. All of the covenants, agreements and obligations of the parties contained in this Agreement or any other document, certificate, schedule or instrument delivered or executed in connection herewith shall survive (i) until fully performed or fulfilled,

unless non-compliance with such covenants, agreements or obligations is waived in writing by the party or parties entitled to such performance or (ii) if not fully performed or fulfilled, until the expiration of the relevant statute of limitations.

(b) The representations, warranties, covenants and obligations of Cellatope, and the rights and remedies that may be exercised by the Cypress Indemnitees, shall not be limited or otherwise affected by or as a result of any information furnished to, or any investigation made by or knowledge of, any of the Cypress Indemnitees or any of their Representatives. The parties recognize and agree that the representations and warranties also operate as bargained for promises and risk allocation devices and that, accordingly, any party's knowledge, and the waiver of any condition based on the accuracy of any representation or warranty, or on the performance of or compliance with any covenant or obligation, shall not affect the right to indemnification or payment of Damages pursuant to this Section 10, or other remedy based on such representations, warranties, covenants, and obligations,

(c) For purposes of this Section 10, each statement or other item of information set forth in the Cellatope Disclosure Schedule shall be deemed to be a representation and warranty or a qualification to a representation or warranty, as the case may be, made by Cellatope in this Agreement.

10.2 Indemnification by the Parties.

(a) From and after the Closing Date (but subject to Section 10.1(a) and the limitations set forth in Section 10.3 below), each Cypress Indemnitee shall be held harmless and shall be indemnified from and against, and shall be compensated, reimbursed and paid for, any Damages which are directly or indirectly suffered or incurred by any Cypress Indemnitee or to which any Cypress Indemnitee may otherwise become subject (regardless of whether or not such Damages relate to any third-party claim) and which arise from or as a result of, or are directly or indirectly connected with: (i) any inaccuracy in or breach or (in the case of a third-party claim that, if determined in favor of the applicable third party, would result in a breach) alleged breach of any representation or warranty of Cellatope set forth in this Agreement, in the Cellatope Compliance Certificate, or in the certificate provided pursuant to Section 7.5(vi) (without giving effect, in each case, to any information provided by Cellatope pursuant to Section 62); (ii) any breach or (in the case of a third-party claim that, if determined in favor of the applicable third party, would result in a breach) alleged breach of any covenant or obligation of Cellatope set forth in this Agreement (including the covenants set forth in Sections 5 and 6) to be performed on or prior to Closing (without giving effect, in each case, to any information provided by Cellatope pursuant to Section 6.2), (iii) any Excluded Liability, (iv) any Liability incurred pursuant to any applicable bulk sale law or based on noncompliance therewith or (v) any Legal Proceeding relating to any inaccuracy or breach of the type referred to in clauses (i) or (ii) or relating to clauses (iii) or (iv) above (including any Legal Proceeding commenced by any Cypress Indemnitee for the purpose of enforcing any of its rights under this Section 10 if a Cypress Indemnitee is the prevailing party therein).

(b) In the event any Cypress Indemnitee shall suffer any Damages for which such Cypress Indemnitee is entitled to indemnification under this Section 10 (as determined pursuant to Section 10.5), such Cypress Indemnitee shall be entitled to recover such Damages

by, first, obtaining the amount of Escrow Funds, if any, equal in value to the aggregate amount of such Damages, and, second, once no Escrow Funds remain in the Escrow Fund pursuant to depletion of the Escrow Funds or expiration of the Escrow Claim Period, and only in the case of inaccuracies in or breaches or (in the case of a third-party claim that, if determined in favor of the applicable third party, would result in a breach) alleged breaches of any of the representations and warranties in Section 3.5 (Intellectual Property), by setting off the amount of such Damages (or the remaining amount of such Damages, after giving effect to any amounts obtained for such Damages from the Escrow Fund) up to a maximum of $300,000 payable pursuant to all set-offs (the "***Set-Off Funds***") first against the next Annual Payment to come due, if applicable and second against any Milestone Consideration remaining to be paid, in accordance with Section 10.6. Any such set off against an Annual Payment or against Milestone Consideration shall be paid in cash. Claims for Set-off Funds made by the Cypress Indemnitees relating to any alleged breach of any of the representations and warranties in Section 3.5 (Intellectual Property) of this Agreement may be made until the earlier of the payment of the Milestone Consideration or the Holdback Payment Date. If at any time prior to the earlier of the payment of the Milestone Consideration or the Holdback Payment Date, any Cypress Indemnitee delivers to Cellatope a written notice alleging the existence of an inaccuracy in or a breach of any of the representations and warranties made by Cellatope in Section 3.5 (Intellectual Property) (and setting forth in reasonable detail the basis for such Cypress Indemnitee's belief that such an inaccuracy or breach may exist) and asserting a claim for recovery based on such alleged inaccuracy or breach, then the representation or warranty underlying the claim asserted in such notice shall survive the earlier of the payment of the Milestone Consideration or the Holdback Payment Date until such time as such claim is fully and finally resolved, for the sole purpose of remaining in effect in order to permit such claim to be fully and finally resolved. In addition to the foregoing, in the case of fraud or intentional misrepresentation, the Cypress Indemnitees shall be entitled to bring suit for and recover Damages without any limitation against Cellatope and against any other Person who committed or participated in such fraud or intentional misrepresentation.

(c) From and after the Closing Date (but subject to Section 10.1(a) and the limitations set forth in Section 10.3 below), each Cellatope Indemnitee shall be held harmless and shall be indemnified by Cypress from and against, and shall be compensated, reimbursed and paid for, any Damages which are directly or indirectly suffered or incurred by any Cellatope Indemnitee or to which any Cellatope Indemnitee may otherwise become subject (regardless of whether or not such Damages relate to any third-party claim) and which arise from or as a result of, or are directly or indirectly connected with: (i) any inaccuracy in or breach or (in the case of a third-party claim that, if determined in favor of the applicable third party, would result in a breach) alleged breach of any representation or warranty of Cypress set forth in this Agreement, in the Cypress Compliance Certificate, or in the certificate provided pursuant to Section 8.3 (without giving effect, in each case, to any information provided by Cypress pursuant to Section 6.2); (ii) any breach or (in the case of a third-party claim that, if determined in favor of the applicable third party, would result in a breach) alleged breach of any covenant or obligation of Cypress set forth in this Agreement (including the covenants set forth in Section 6) to be performed on or prior to Closing (without giving effect, in each case, to any information provided by Cypress pursuant to Section 6.2), (iii) any Assumed Liability or (iv) any Legal Proceeding relating to any inaccuracy or breach of the type referred to in clauses (i) or (ii) or relating to clause (iii) above (including any Legal Proceeding commenced by any Cellatope

Indemnitee for the purpose of enforcing any of its rights under this Section 10 if a Cellatope Indemnitee is the prevailing party therein).

10.3 Threshold/Limitations.

(a) Subject to Section 10.3(b), the Cypress Indemnitees shall not be entitled to any indemnification payment pursuant to Section 10.2(a)(i) (and under Section 10.2(a)(v) with respect to a Legal Proceeding relating to a claim under Section 10.2(a)(i)), until such time as the total amount of all Damages that have been directly or indirectly suffered or incurred by any one or more of the Cypress Indemnitees, or to which any one or more of the Cypress Indemnitees has or have otherwise become subject, exceeds $10,000 in the aggregate (the "***Threshold***"). If the total amount of such Damages exceeds the Threshold, then the Cypress Indemnitees shall be entitled to be indemnified against and compensated and reimbursed for the full amount of such Damages, including the amount of the Threshold.

(b) The limitations that are set forth in Section 10.3(a) shall not apply in the case of fraud or intentional misrepresentation.

(c) Subject to Section 10.3(d), the Cellatope Indemnitees shall not be entitled to any indemnification payment pursuant to Section 10.2(c)(i) (and under Section 10.2(c)(iv) with respect to a Legal Proceeding relating to a claim under Section 10.2(c)(i)), until such time as the total amount of all Damages that have been directly or indirectly suffered or incurred by any one or more of the Cellatope Indemnitees, or to which any one or more of the Cellatope Indemnitees has or have otherwise become subject, exceeds the Threshold. If the total amount of such Damages exceeds the Threshold, then the Cellatope Indemnitees shall be entitled to be indemnified against and compensated and reimbursed for the full amount of such Damages, including the amount of the Threshold, *provided*, *however*, that, notwithstanding the foregoing, the maximum aggregate liability of Cypress to the Cellatope Indemnitees for Damages under Section 10.2(c) shall equal ten percent of the Closing Consideration, Milestone Consideration and Annual Payments required to be paid to Cellatope pursuant to Section 2 of this Agreement at any time, and Cypress shall have no obligation under Section 10.2(c) to indemnify the Cellatope Indemnitees for Damages in excess of such amount.

(d) The limitations set forth in Section 10.3(c) shall not apply in the case of fraud or intentional misrepresentation.

10.4 Defense of Third Party Claims.

(a) In the event of the assertion or commencement by any Person of any claim or Legal Proceeding (whether against Cypress, Cellatope or against any other Person) with respect to which any of the Cypress Indemnitees or Cellatope Indemnitees may be entitled to indemnification pursuant to this Section 10, the Cypress Indemnitee(s) or Cellatope Indemnitee(s) seeking indemnification (the "***Indemnified Person***") shall promptly give the party obligated to provide indemnification under this Section 10 (the "***Indemnifying Person***") and, with respect to Indemnification Demands made by Cypress Indemnitees, the Escrow Agent, written notice (a "***Claim Notice***") of such claim (a "***Claim***") or Legal Proceeding. If the contents and delivery of a Claim Notice satisfy the content and delivery requirements of an

Indemnification Demand pursuant to Section 10.5, then such Claim Notice shall also be deemed to be an Indemnification Demand. The Claim Notice shall be accompanied by reasonable supporting documentation submitted by the third party making such Claim (to the extent then in the possession of the Indemnified Person) and shall describe in reasonable detail (to the extent known by the Indemnified Person) the facts constituting the basis for such Claim and the amount of the claimed Damages; *provided*, *however*, that no delay or failure on the part of the Indemnified Person in delivering a Claim Notice shall relieve the Escrow Fund, any applicable Annual Payment or the Milestone Consideration or the Indemnifying Person, as applicable, from any indemnification liability hereunder except to the extent such failure materially prejudices the defense of such Claim or Legal Proceeding. The Indemnified Person shall have the right, at its election, to proceed with the defense of such Claim or Legal Proceeding on its own.

(b) Within 30 days of delivery of the Claim Notice, if the Indemnified Person has not elected to proceed with the defense of such Claim or Legal Proceeding on its own, the Indemnifying Person may elect (by written notice delivered to the Indemnified Person) to take all necessary steps to contest any Claim or Legal Proceeding involving third parties or to prosecute such Claim or Legal Proceeding to conclusion or settlement. If the Indemnifying Person makes the foregoing election, the Indemnified Person will have the right to participate at its own expense in all proceedings. If the Indemnifying Person does not make such election within such period or fails to diligently contest such Claim or Legal Proceeding after such election, then the Indemnified Person shall be free to handle the prosecution or defense of any such Claim or Legal Proceeding, and will take all necessary steps to contest the Claim or Legal Proceeding involving third parties or to prosecute such Claim or Legal Proceeding to conclusion or settlement, and will notify the Indemnifying Person of the progress of any such Claim or Legal Proceeding, will permit the Indemnifying Person, at the sole cost of such Indemnifying Person, to participate in such prosecution or defense and will provide the Indemnifying Person with reasonable access to all relevant information and documentation relating to the Claim or Legal Proceeding and the prosecution or defense thereof. If the Indemnified Person proceeds with the defense of any such Claim or Legal Proceeding on its own in accordance with the last sentence of Section 10.4(a), all of the Indemnified Person's expenses relating to the defense of such Claim or Legal Proceeding shall constitute Damages and be eligible for indemnification in accordance with, and subject to the terms and limitations of, this Section 10.

(c) Neither party will compromise or settle any such Claim or Legal Proceeding without the written consent of either the Indemnified Person (if the Indemnifying Person defends the Claim or Legal Proceeding) or the Indemnifying Person (if the Indemnified Person defends the Claim or Legal Proceeding), such consent not to be unreasonably withheld. In any case, the party not in control of the Claim or Legal Proceeding will cooperate with the other party in the conduct of the prosecution or defense of such Claim or Legal Proceeding. In the event that an Indemnified Person delivers a Claim Notice in connection with a claim for indemnification with respect to third party claims for which the procedures set forth in Section 10.4(a), (b) and (c) have been followed, the Indemnified Person shall comply with the procedures set forth in Section 10.5(a), (b), (c) and (d) hereof and in the Escrow Agreement. Any such procedures shall be in addition to and not in lieu of the indemnification procedures set forth in Section 10.4(a), (b) and (c).

10.5 Indemnification Claims.

(a) In order for any Indemnified Person to seek indemnification under this Section 10, such Indemnified Person shall deliver, in good faith, a written demand (an "***Indemnification Demand***") to the Indemnifying Person and, in the case of the Cypress Indemnitees, to the Escrow Agent, which contains (i) a description and the amount (the "***Asserted Damages Amount***") of any Damages incurred or reasonably expected to be incurred by the Indemnified Person, (ii) a statement that the Indemnified Person is entitled to indemnification under this Section 10 for such Damages and a reasonable explanation of the basis therefor, and (iii) a demand for payment in the amount of such Damages.

(b) Within 20 days after delivery of an Indemnification Demand, the Indemnifying Person shall deliver to the Indemnified Person a written response (the "***Response***") in which the Indemnifying Person shall: (i) agree that the Indemnified Person is entitled to receive all of the Asserted Damages Amount, and, in the case of an Indemnification Demand made by a Cypress Indemnitee, the Indemnified Person and the Indemnifying Person shall deliver to the Escrow Agent, within three days following the delivery of the Response, a written notice executed by both such parties instructing the Escrow Agent to disburse the full Asserted Damages Amount to the extent of the remaining Escrow Funds to the Indemnified Person; (ii) agree that the Indemnified Person is entitled to receive part, but not all, of the Asserted Damages Amount (such portion, the "***Agreed Portion***"), and, in the case of an Indemnification Demand made by a Cypress Indemnitee, the Indemnified Person and the Indemnifying Person shall deliver to the Escrow Agent, within three days following the delivery of the Response, a written notice executed by both such parties instructing the Escrow Agent to disburse the Agreed Portion to the extent of the remaining Escrow Funds to the Indemnified Person; or (iii) dispute that the Indemnified Person is entitled to receive any of the Asserted Damages Amount.

(c) In the event that the Indemnifying Person shall (i) dispute that the Indemnified Person is entitled to receive any of the Asserted Damages Amount, or (ii) agrees that the Indemnified Person is entitled to only the Agreed Portion of the Asserted Damages Amount, the Indemnified Person and the Indemnifying Person shall attempt in good faith to agree upon the rights of the respective parties with respect to each of the indemnification claims that comprise the Asserted Damages Amount (or the portion of the Asserted Damages Amount not comprising the Agreed Portion). If the Indemnified Person and the Indemnifying Person should so agree, a memorandum setting forth such agreement shall be prepared and signed by both such parties and, in the case of an Indemnification Demand made by a Cypress Indemnitee, shall be furnished to the Escrow Agent. If no such agreement can be reached after good faith negotiation within 60 days after delivery of a Response, either the Indemnified Person or the Indemnifying Person may demand arbitration of any matter set forth in the applicable Indemnification Demand.

(d) If no agreement is reached, the matter shall be settled by arbitration conducted by one arbitrator mutually agreeable to the Indemnified Person and the Indemnifying Person. In the event that, within thirty days after submission of any dispute to arbitration, the Indemnified Person and the Indemnifying Person cannot mutually agree on one arbitrator, then the parties shall arrange for the American Arbitration Association to designate a single arbitrator' in accordance with the rules of the American Arbitration Association. Any such arbitration shall

be held in San Diego County, California, under the rules and procedures then in effect of the American Arbitration Association. The arbitrator shall determine how all expenses relating to the arbitration shall be paid, including the respective expenses of each party, the fees of the arbitrator and the administrative fee of the American Arbitration Association. The arbitrator shall set a limited time period and establish procedures designed to reduce the cost and time for discovery while allowing the Indemnified Person and the Indemnifying Person an opportunity, adequate in the sole judgment of the arbitrator to discover relevant information from the opposing parties about the subject matter of the dispute. The arbitrator shall rule upon motions to compel or limit discovery and shall have the authority to impose sanctions, including attorneys' fees and costs, to the same extent as a competent court of law or equity, should the arbitrator determine that discovery was sought without substantial justification or that discovery was refused or objected to without substantial justification. The decision of the arbitrator as to the validity and amount of any indemnification claim in such Indemnification Demand shall be subject to the limitations set forth in this Agreement and final, binding and conclusive upon the parties. Such decision shall be written and shall be supported by written findings of fact and conclusions which shall set forth the award, judgment, decree or order awarded by the arbitrator. All payments required by the arbitrator shall be made within thirty days after the decision of the arbitrator is rendered. Judgment upon any award rendered by the arbitrator may be entered in any court having jurisdiction.

10.6 Setoff Rights. Cypress may withhold and set off against any amounts due Cellatope with respect to first, any Annual Payment and second, the Milestone Consideration, up to the maximum amount of Set-Off Funds, as to which any Cypress Indemnitee is entitled to indemnification pursuant to Section 10.2 with respect to inaccuracies in or breaches or (in the case of a third-party claim that, if determined in favor of the applicable third party, would result in a breach) alleged breaches of any of the representations and warranties in Section 3.5 (Intellectual Property), subject to the limitations in Section 10.3. Cypress and Cellatope shall follow the procedures set forth in Sections 10.4 and 10.5 for handling indemnification claims (both based on third-party suits and directly) between the parties in the event Cypress seeks to set off any amounts against any Annual Payment or the Milestone Consideration under this Section 10.6, subject to appropriate adjustment to reflect that neither the Escrow Agent nor the Escrow Fund will be involved in the resolution of such indemnification claims. Any claim by a Cypress Indemnitee hereunder must be satisfied first from the Escrow Fund in accordance with the procedures set forth in Section 10, second as a set-off against any Annual Payment and third as a set-off against any amounts of the Milestone Consideration due Cellatope.

10.7 Exercise of Remedies by Cypress Indemnitees Other Than Cypress. No Cypress Indemnitee (other than Cypress or any successor thereto or assign thereof) shall be permitted to assert any indemnification claim or exercise any other remedy under this Agreement unless Cypress (or any successor thereto or assign thereof) shall have consented to the assertion of such indemnification claim or the exercise of such other remedy.

10.8 Exclusive Remedy. From and after the Closing Date and except as expressly provided in Section 11.10, the parties hereto acknowledge and agree that the indemnification provisions of this Section 10 shall be the sole and exclusive remedy of the Indemnified Persons with respect to any and all claims based upon, arising out of, or otherwise in respect of this Agreement, except with respect to claims for fraud or intentional misrepresentation. For the

avoidance of doubt, the Cypress Indemnitees' sole recourse for the indemnification provided by this Section 10 shall be to the Escrow Fund and the Set-Off Funds then-available, pursuant to the procedures and limitations set forth in this section, *provided*, that in the event of Claims involving fraud or intentional misrepresentation, the Cypress Indemnitees and Cellatope Indemnitees shall be entitled to bring suit for and recover Damages without any limitation against Cellatope or Cypress (as applicable) and against any other Person who committed or participated in such fraud or intentional misrepresentation.

10.9 No Implied Representations. The parties acknowledge and agree that except as expressly provided in Sections 3 and 4 or in the Cellatope Compliance Certificate, or in the certificate provided pursuant to Section 7.5(vi), or in the certificate provided by Cypress pursuant to Section 8.3 or in any other Related Agreement, no party hereto, and none of the Representatives of any party hereto, has made or is making any representations or warranties whatsoever, implied or otherwise.

11. MISCELLANEOUS PROVISIONS.

11.1 Further Assurances. Each party hereto shall execute and cause to be delivered to each other party hereto such instruments and other documents, and shall take such other actions, as such other party may reasonably request (prior to, at or after the Closing) for the purpose of carrying out or evidencing any of the Transactions.

11.2 Fees and Expenses. Subject to the terms of this Agreement, each party to this Agreement shall bear and pay all fees, costs and expenses (including legal fees and accounting fees) that have been incurred or that are incurred by such party in connection with the transactions contemplated by this Agreement, including all fees, costs and expenses incurred by such party in connection with or by virtue of (a) the investigation and review conducted by Cypress and its Representatives with respect to the Acquired Assets (and the furnishing of information to Cypress and its Representatives in connection with such investigation and review), (b) the negotiation, preparation and review of this Agreement (including the Cellatope Disclosure Schedule) and all agreements, certificates, opinions and other instruments and documents delivered or to be delivered in connection with the Transactions, (c) the preparation and submission of any filing or notice required to be made or given in connection with any of the Transactions, and the obtaining of any Consent required to he obtained in connection with any of such Transactions, and (d) the consummation of the Transactions.

11.3 Attorneys' Fees. If any action or proceeding relating to this Agreement or the enforcement of any provision of this Agreement is brought against any party hereto, the prevailing party shall be entitled to recover reasonable attorneys' fees, costs and disbursements (in addition to any other relief to which the prevailing party may be entitled).

11.4 Notices. Any notice or other communication required or permitted to be delivered to any party under this Agreement shall be in writing and shall be deemed properly delivered, given and received when delivered (by hand, by registered mail, by courier or express delivery service or by facsimile) to the address or facsimile telephone number set forth beneath the name of such party below (or to such other address or facsimile telephone number as such party shall have specified in a written notice given to the other parties hereto):

if to Cypress:

CYPRESS BIOSCIENCE, INC.
4350 Executive Drive, Suite 325
San Diego, CA 92121
Attn: General Counsel
Fax: (858) 452-1222

with copy to (which copy shall not constitute notice):

COOLEY GODWARD KRONISH LLP
4401 Eastgate Mall
San Diego, CA 92121
Attn: Matthew T. Browne, Esq.
Fax: (858) 550-6420

if to Cellatope:

c/o EDWARD L. ERICKSON
PO Box 657
PLUMSTEADVILLE, PA 18949

with copies to (which copy shall not constitute notice):

BUCHANAN INGERSOLL & ROONEY PC
301 GRANT STREET, 20TH FLOOR
ONE OXFORD CENTRE
PITTSBURGH, PA 15219
Attn: Perry S. Patterson
Fax: 412.562.4041

11.5 Time of the Essence. Time is of the essence of this Agreement.

11.6 Headings. The headings contained in this Agreement are for convenience of reference only, shall not be deemed to be a part of this Agreement and shall not be referred to in connection with the construction or interpretation of this Agreement.

11.7 Counterparts. This Agreement may be executed in several counterparts, each of which shall constitute an original and all of which, when taken together, shall constitute one agreement.

11.8 Governing Law; Jurisdiction and Venue.

(a) This Agreement shall be construed in accordance with, and governed in all respects by, the internal laws of the State of California (without giving effect to principles of conflicts of laws).

(b) Subject to Section 2 2(b)(ii) and Section 10.5(d), any legal action or other legal proceeding relating to this Agreement or the enforcement of any provision of this Agreement shall be brought or otherwise commenced exclusively in any state or federal court located in San Diego County, California. Subject to Section 2 2(b)(ii) and Section 10.5(d), Cellatope and Cypress each:

(i) expressly and irrevocably consents and submits to the jurisdiction of each state and federal court located in San Diego County, California (and each appellate court located in the State of California), in connection with any legal proceeding;

(ii) agrees that service of any process, summons, notice or document by U.S. mail addressed to it at the address set forth in Section 11.4 shall constitute effective service of such process, summons, notice or document for purposes of any such legal proceeding;

(iii) agrees that each state and federal court located in San Diego County, California, shall be deemed to be a convenient forum; and

(iv) agrees not to assert (by way of motion, as a defense or otherwise), in any such legal proceeding commenced in any state or federal court located in San Diego County, California, any claim by either Cellatope or Cypress that it is not subject personally to the jurisdiction of such court, that such legal proceeding has been brought in an inconvenient forum, that the venue of such proceeding is improper or that this Agreement or the subject matter of this Agreement may not be enforced in or by such court.

11.9 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their successors and assigns (if any). Subject to Section 2.2 with respect to a Change of Control, Cypress may freely assign any or all of its rights or delegate any or all of its obligations under this Agreement (including its indemnification rights under Section 10), in whole or in part, to any other Person without obtaining the consent or approval of any other party hereto, and, in connection with any such delegation of obligations that is in compliance with such section, the parties acknowledge and agree that Cypress shall not retain any obligation to continue to satisfy or perform such obligations. Cellatope shall not be permitted to assign any of its rights or delegate any of its obligations under this Agreement without Cypress' prior written consent, *provided that*, Cellatope may assign its rights or delegate any of its obligations to a liquidating trust from and after the Closing.

11.10 Remedies Cumulative; Specific Performance. The rights and remedies of the parties hereto shall be cumulative (and not alternative). The parties to this Agreement agree that, in the event of any breach or threatened breach by any party to this Agreement of any covenant, obligation or other provision set forth in this Agreement for the benefit of any other party to this Agreement, such other party shall be entitled (in addition to any other remedy that may be

available to it) to (a) a decree or order of specific performance or mandamus to enforce the observance and performance of such covenant, obligation or other provision, and (b) an injunction restraining such breach or threatened breach.

11.11 Waiver. No failure on the part of any Person to exercise any power, right, privilege or remedy under this Agreement, and no delay on the part of any Person in exercising any power, right, privilege or remedy under this Agreement, shall operate as a waiver of such power, right, privilege or remedy and no single or partial exercise of any such power, right, privilege or remedy shall preclude any other or further exercise thereof or of any other power, right, privilege or remedy. No Person shall be deemed to have waived any claim arising out of this Agreement, or any power, right, privilege or remedy under this Agreement, unless the waiver of such claim, power, right, privilege or remedy is expressly set forth in a written instrument duly executed and delivered on behalf of such Person; and any such waiver shall not be applicable or have any effect except in the specific instance in which it is given.

11.12 Amendments. This Agreement may not be amended, modified, altered or supplemented other than by means of a written instrument duly executed and delivered on behalf of all of the parties hereto.

11.13 Severability. In the event that any provision of this Agreement, or the application of any such provision to any Person or set of circumstances, shall be determined to be invalid, unlawful, void or unenforceable to any extent, the remainder of this Agreement, and the application of such provision to Persons or circumstances other than those as to which it is determined to be invalid, unlawful, void or unenforceable, shall not be impaired or otherwise affected and shall continue to be valid and enforceable to the fullest extent permitted by law.

11.14 Parties in Interest. Except for the provisions of Section 10 with respect to the Cypress Indemnitees and Cellatope Indemnitees, none of the provisions of this Agreement is intended to provide any rights or remedies to any Person other than the parties hereto.

11.15 Entire Agreement. This Agreement and the Related Agreements set forth the entire understanding of the parties hereto relating to the subject matter hereof and thereof and supersede all prior agreements and understandings among or between any of the parties relating to the subject matter hereof and thereof; *provided*, *however*, that the Confidentiality Agreement shall not be superseded by this Agreement and shall remain in effect in accordance with its terms until the date on which such Confidentiality Agreement is terminated in accordance with its terms.

11.16 Construction.

(a) For purposes of this Agreement, whenever the context requires: the singular number shall include the plural, and vice versa; the masculine gender shall include the feminine and neuter genders; the feminine gender shall include the masculine and neuter genders; and the neuter gender shall include the masculine and feminine genders.

(b) The parties hereto agree that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not be applied in the construction or interpretation of this Agreement.

(c) As used in this Agreement, the words “include” and “including,” and variations thereof, shall not be deemed to be terms of limitation, but rather shall be deemed to be followed by the words “without limitation.”

(d) Except as otherwise indicated, all references in this Agreement to “Sections” and “Exhibits” are intended to refer to Sections of this Agreement and Exhibits to this Agreement.

The parties hereto have caused this Agreement to be executed and delivered as of the date first set forth above

CYPRESS BIOSCIENCE, INC.,
a Delaware corporation

By: /s/ Jay Kranzler
Name: Jay Kranzler
Title: Chief Executive Officer

CELLATOPE CORPORATION,
a Delaware corporation

By: /s/ Edward L. Erickson
Name: Edward L. Erickson
Title: Chairman, President & CEO

EXHIBIT A

CERTAIN DEFINITIONS

For purposes of the Agreement (including this **Exhibit A):**

"**Acquired Assets**" has the meaning set forth in Section 1.1(a) of this Agreement.

"**Acquired Contracts**" means all rights of Cellatope under the Contracts listed on **Schedule 1.1 (a)(iv)**.

"**Acquired Copyrights**" means (a) the works identified in **Exhibit L** hereto (the "***Works***"), and (b) all copyrights, copyright applications, copyright registrations, copyrightable subject matter in the Works, rights of renewal, reproduction, distribution, performance and display, the right to prepare derivative works, and any and all causes of action heretofore accrued in Cellatope's or any of its Affiliates' favor for infringement of the aforesaid rights. For purposes of this Agreement, Acquired Copyrights includes Cellatope's rights to do, or prohibit or authorize any third party to do, any act which, but for Cellatope's ownership of the copyright in the Works by virtue of section 1.1(2) of the Copyright Designs and Patents Act 1988 or any analogous law in any jurisdiction, would infringe any of the author's Moral Rights in the Works. As used herein, "Moral Rights" means the rights of the author under Chapter IV of the Copyright Designs and Patents Act 1988: (a) to be identified as the author of his work; (b) to object to derogatory treatment of his work; and (c) not to have any work falsely attributed to him as author and any other similar or analogous rights, existing under judicial or statutory law of any other country or jurisdiction in the world, or under any treaty regardless of whether or not such right is called or generally referred to as a moral right.

"**Acquired Fixed Assets**" has the meaning set forth in Section 1.1(a)(iii)(5) of this Agreement.

"**Acquired Know-How**" shall mean, to the extent necessary for the manufacture, use or sale of any Lupus Monitoring Product or for the use or exploitation of the Technology, Information not included in the Compound Patents that Cellatope or any of its Affiliates Controls on the Closing Date.

"**Acquired Patents**" shall mean, to the extent necessary for the manufacture, use or sale of any Lupus Monitoring Product or for the use or exploitation of the Technology, all Patents that Cellatope or any of its Affiliates Controls as of the Closing Date. The Acquired Patents in existence as of the Closing Date are listed in **Exhibit M** hereto.

"**Acquired Technology**" shall mean all Acquired Patents, Acquired Know-How, Acquired Copyrights and Acquired Trademarks.

"**Acquired Trademarks**" shall mean the trademarks, trade names and/or logos identified in **Exhibit N** hereto (the "***Marks***"), and that part of the goodwill of Cellatope's and its Affiliates' business connected with the use of, and symbolized by, the Marks, together with all other rights that inhere in such Marks.

"**Acquirer**" has the meaning set forth in Section 2.2(c) of this Agreement.

"**Acquisition Transaction**" means any transaction directly or indirectly involving:

(a) the sale, license or disposition of all or a material portion of the business or assets of Cellatope or any direct or indirect subsidiary or division of Cellatope; or

(b) any merger, consolidation, business combination, share exchange, recapitalization, reorganization or similar transaction involving Cellatope or any direct or indirect subsidiary of Cellatope.

"**Affiliate**" means, with respect to any Person, any other Person, directly or indirectly, controlling, controlled by or under common control with such Person.

"**Agreed Portion**" has the meaning set forth in Section 10.5(b) of this Agreement.

"**Agreement**" means the Asset Purchase Agreement to which this **Exhibit A** is attached.

"**Amended Pittsburgh License**" has the meaning set forth in Section 7.5(ix) of this Agreement.

"**Annual Payment**" has the meaning set forth in Section 2.2(e) of this Agreement.

"**Applicable Public Companies**" means Entities whose common stock is traded on the New York Stock Exchange, The American Stock Exchange or The Nasdaq Stock Market, LLC and that have a market capitalization (calculated by multiplying the closing selling price or, if there is no closing selling price, the closing bid price by the number of shares outstanding on the trading day immediately preceding the date of public announcement of the applicable Change of Control) of $100,000,000 or more.

"**Asserted Damages Amount**" has the meaning set forth in Section 10.5(a) of this Agreement.

"**Assumed Liabilities**" has the meaning set forth in Section 1.2(a) of this Agreement.

"**Board Approval Date**" has the meaning set forth in Section 3.1.3(a) of this Agreement.

"**Cellatope**" has the meaning set forth in the introductory paragraph of this Agreement.

"**Cellatope Capital Stock**" means the shares of Cellatope common stock and Cellatope preferred stock.

"**Cellatope Compliance Certificate**" has the meaning set forth in Section 7.5(v) of this Agreement.

"**Cellatope Contract**" means any Contract, including any amendment or supplement thereto: (a) to which Cellatope is a party; (b) by which Cellatope or, to Cellatope's knowledge, any of its assets is bound or under which Cellatope has any obligation; or (c) under which Cellatope has any right or interest.

"**Cellatope Disclosure Schedule**" means the schedule of exceptions to the representations and warranties of Cellatope contained in Section 3 of this Agreement (dated as of the date of this Agreement) delivered to Cypress on behalf of Cellatope on the date of this Agreement.

"**Cellatope Indemnitees**" mean the following Persons: (a) Cellatope; (b) Cellatope's current and future Affiliates; (c) the respective Representatives of the Persons referred to in clauses "(a)" and "(b)" above (other than agents, attorneys, accountants, advisors and representatives thereof); and (d) the respective successors and assigns of the Persons referred to in clauses "(a)," "(b)" and "(c)" above.

"**Cellatope Information Statement**" has the meaning set forth in Section 5.3(a) of this Agreement.

"**Cellatope IP**" means all Intellectual Property Rights and Intellectual Property owned by or exclusively licensed to Cellatope.

"**Cellatope IP Contract**" means any Contract to which Cellatope is a party or by which Cellatope is bound, that contains any assignment or license of, or covenant not to assert or enforce, any Intellectual Property Right or that otherwise relates to any Cellatope IP or any Intellectual Property developed by, with, or for Cellatope.

"**Cellatope Products**" has the meaning set forth in Section 3.5(a) of this Agreement.

"**Cellatope Returns**" means all United States federal and state income Tax Returns and all other material Tax Returns required to be filed by or on behalf of Cellatope with any Governmental Body on or before the Closing Date.

"**Cellatope Stockholder**" means a holder of record of shares of Cellatope Capital Stock outstanding as of immediately prior to the Closing.

"**Change of Control**" means (a) a sale or other disposition of all or substantially all of the assets of Cypress on a consolidated basis (other than to Cypress or any subsidiary (direct or indirect) of Cypress), (b) a merger or consolidation in which Cypress is not the surviving Entity and in which the stockholders of Cypress immediately prior to such consolidation or merger own less than fifty percent (50%) of the surviving Entity's voting power immediately after the transaction, and (c) a reverse merger in which Cypress is the surviving Entity but the shares of Cypress' common stock outstanding immediately preceding the merger are converted by virtue of the merger into other property, whether in the form of securities, cash or otherwise, and in which the stockholders of Cypress immediately prior to such reverse merger own less than fifty percent (50%) of Cypress' voting power immediately after the transaction.

"**Claim**" has the meaning set forth in Section 10.4(a) of this Agreement.

"**Claim Notice**" has the meaning set forth in Section 10.4(a) of this Agreement.

"**Closing**" has the meaning set forth in Section 1.3 of this Agreement.

"**Closing Consideration**" has the meaning set forth in Section 2.1(a) of this Agreement.

"**Closing Date**" has the meaning set forth in Section 1.3 of this Agreement.

"**Confidentiality Agreement**" has the meaning set forth in Section 2.2(d) of this Agreement.

"**Consent**" means any approval, consent, ratification, permission, waiver or authorization (including any Governmental Authorization).

"**Consulting Agreement**" has the meaning set forth in the Recitals to this Agreement.

"**Contract**" means any written, oral or other agreement, contract, subcontract, lease, understanding, instrument, note, warranty, license, sublicense, insurance policy, benefit plan or legally binding commitment or undertaking of any nature, whether express or implied.

"**Control**" shall mean, with respect to any Information, Patent or other Intellectual Property Right, possession by a party of the ability (whether by ownership, license or otherwise) to grant access, a license or a sublicense to such Information, Patent or Intellectual Property Right without violating the terms of any agreement or other arrangement with any third party.

"**Cypress**" has the meaning set forth in the introductory paragraph of this Agreement.

"**Cypress Indemnitees**" mean the following Persons: (a) Cypress; (b) Cypress' current and future Affiliates; (c) the respective Representatives of the Persons referred to in clauses "(a)" (other than agents, attorneys, accountants, advisors and representatives thereof) and "(b)" above; and (d) the respective successors and assigns of the Persons referred to in clauses "(a)," "(b)" and "(c)" above.

"**Cypress IP**" has the meaning set forth in Section 2.2(c)(ii) of this Agreement.

"**Damages**" include any loss, damage, injury, liability, claim, demand, settlement, judgment, award, fine, penalty, Tax, fee (including reasonable attorneys' fees), charge, cost (including costs of investigation) or expense of any nature; *provided that*, other than in the case of fraud or intentional misrepresentation, Damages shall not include consequential, special, punitive or statutory multiples of damages, except to the extent payable to a third party.

"**DGCL**" means Delaware General Corporation Law.

"**Encumbrance**" means any lien, pledge, hypothecation, charge, mortgage, security interest, encumbrance, claim, infringement, interference, option, right of first refusal, preemptive right, community property interest or restriction of any nature affecting property, real or personal, tangible or intangible, including any restriction on the voting of any security, any restriction on the transfer of any security or other asset, any restriction on the receipt of any income derived from any asset, any restriction on the use of any asset, any restriction on the possession, exercise or transfer of any other attribute of ownership of any asset, any lease in the nature thereof and any filing of or agreement to give any financing statement under the Uniform

Commercial Code (or equivalent statute of any jurisdiction), but excluding any such matter with respect to Acquired Contracts expressly set forth in such Acquired Contract.

"**Entity**" means any corporation (including any non-profit corporation), general partnership, limited partnership, limited liability partnership, joint venture, estate, trust, company (including any limited liability company or joint stock company), firm or other enterprise, association, organization or entity.

"**Escrow Agent**" has the meaning set forth in Section 2.3(a) of this Agreement.

"**Escrow Agreement**" has the meaning set forth in Section 2.3(a) of this Agreement.

"**Escrow Claim Period**" has the meaning set forth in Section 23(b) of this Agreement.

"**Escrow Fund**" has the meaning set forth in Section 2.3(a) of this Agreement.

"**Escrow Funds**" has the meaning set forth in Section 2.3(a) of this Agreement.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"**Excluded Assets**" has the meaning set forth in Section 1.1(b) of this Agreement.

"**Excluded Liabilities**" has the meaning set forth in Section 1.2(b) of this Agreement.

"**FDA**" means the United States Food and Drug Administration.

"**First Commercial Sale**" shall mean, with respect to any Lupus Monitoring Product, the first sale for end use or consumption of such Lupus Monitoring Product in a country. Sale to an Affiliate or Licensee shall not constitute a First Commercial Sale unless the Affiliate or Licensee is the end user of the Lupus Monitoring Product.

"**Governmental Authorization**" means any: (a) approval, permit, license, certificate, franchise, permission, clearance, registration, qualification or other authorization issued, granted, given or otherwise made available by or under the authority of any Governmental Body or pursuant to any Legal Requirement; or (b) right under any Contract with any Governmental Body.

"**Governmental Body**" means any: (a) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (b) federal, state, local, municipal, foreign, supranational or other government; or (c) governmental, self-regulatory or quasi-governmental authority of any nature (including any governmental division, department, agency, commission, instrumentality, official, organization, unit, body or Entity and any court or other tribunal).

"**Holdback Payment Date**" has the meaning set forth in Section 2.3(c) of this Agreement.

"**Holdback Release Date**" has the meaning set forth in Section 2.3(c) of this Agreement.

"**Indemnification Demand**" has the meaning set forth in Section 10.5(a) of this Agreement.

"**Information**" shall mean all tangible and intangible (a) techniques, technology, practices, trade secrets, inventions (whether patentable or not), methods, knowledge, know-how, skill, experience, test data and results (including pharmacological, toxicological and clinical test data and results), analytical and quality control data, results or descriptions, software and algorithms and (b) compositions of matter, cells, cell lines, assays, animal models and physical, biological or chemical material.

"**Innovation Works**" has the meaning set forth in the Recitals of this Agreement.

"**Innovation Works Agreement**" has the meaning set forth in the Recitals of this Agreement.

"**Innovation Works Holdback**" has the meaning set forth in Section 2.35(c) of this Agreement.

"**Intellectual Property**" means all data, formulae, inventions (whether or not patentable), know-how, trade secrets, methods, processes, proprietary information, protocols, specifications, techniques, and other forms of technology (whether or not embodied in any tangible form and including all tangible embodiments of the foregoing, such as laboratory notebooks, samples, studies and summaries).

"**Intellectual Property Rights**" means and includes all past, present, and future rights of the following types, which may exist or be created under the laws of any jurisdiction in the world: (a) rights associated with works of authorship, including exclusive exploitation rights, copyrights, moral rights, and mask works; (b) trademark and trade name rights and similar rights; (c) trade secret rights; (d) patents and industrial property rights; (e) other proprietary rights in Intellectual Property of every kind and nature; and (f) all registrations, renewals, extensions, combinations, divisions, or reissues of, and applications for, any of the rights referred to in clauses (a) through (e) above.

"**Inventory**" has the meaning set forth in Section 1.1(a)(iii)(4) of this Agreement.

"**Knowledge**" means an individual will be deemed to have "knowledge" of a particular fact or other matter if such individual has actual knowledge of such fact or other matter. When referring to the "knowledge" of an Entity, such Entity shall be required to cause each of its current officers to make due inquiry of such fact or matter and such Entity shall be deemed to have knowledge of such fact or matter of which any such current officer would be reasonably expected to have knowledge following due inquiry. In the case of Cellatope's knowledge, Cellatope shall cause Joseph Ahearn, M.D., Daniel Graziano, Albert D. Donnenberg, Ph.D., Edward L. Erickson and Lorraine G. LoPresti to make due inquiry of such fact or matter and Cellatope shall be deemed to have knowledge of such fact or matter of which any of such individuals would reasonably be expected to have knowledge following such due inquiry.

"**Legal Proceeding**" means any ongoing or threatened action, suit, litigation, arbitration, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding), hearing, inquiry, audit, examination or investigation commenced, brought, conducted or heard by or before, or otherwise involving, any court or other Governmental Body or any arbitrator or arbitration panel.

"**Legal Requirement**" means any federal, state, local, municipal, foreign or international, multinational other law, statute, constitution, principle of common law, resolution, ordinance, code, edict, decree, rule, regulation, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Body.

"**Liability**" and, plural, "**Liabilities**" means any debt, obligation, duty or liability of any nature (including any unknown, undisclosed, unmatured, unaccrued, unasserted, contingent, indirect, conditional, implied, vicarious, derivative, joint, several or secondary liability), regardless of whether such debt, obligation, duty or liability would be required to be disclosed on a balance sheet prepared in accordance with generally accepted accounting principles and regardless of whether such debt, obligation, duty or liability is immediately due and payable.

"**Licensee**" means any Entity (other than Cypress or Cellatope or an Affiliate of Cypress or Cellatope) to which Cypress or any of its Affiliates grants a license under the Acquired Technology.

"**Lupus Monitoring Product**" has the meaning set forth in Section 2.2(a) of this Agreement.

"**Lupus Monitoring Product Candidates**" has the meaning set forth in Section 2.2(b)(i),

"**Milestone**" has the meaning set forth in Section 2.2(a) of this Agreement.

"**Milestone Consideration**" has the meaning specified in Section 2.2(a) of this Agreement.

"**Milestone Notice**" has the meaning set forth in Section 2.2(a) of this Agreement.

"**Nasdaq**" means The Nasdaq Stock Market, LLC.

"**Nontransferred Assets**" has the meaning set forth in Section 1.1(e) of this Agreement.

"**Non-Paying Party**" has the meaning set forth in Section 6.7 of this Agreement.

"**Order**" means any decree, permanent injunction, order or similar action.

"**Patents**" means (a) United States patents, re-examinations, reissues, renewals, extensions and term restorations, and foreign counterparts thereof, and (b) pending applications for United States patents, including, without limitation, provisional applications, continuations,

continuations-in-part, divisional and substitute applications, including, without limitation, inventors' certificates, and foreign counterparts thereof:

"**Paying Party**" has the meaning set forth in Section 6.7 of this Agreement.

"**Payment Period**" has the meaning set forth in Section 2.2(g) of this Agreement.

"**Person**" means any individual, Entity or Governmental Body.

"**Pittsburgh License**" has the meaning set forth in Section 7.5(ix) of this Agreement.

"**Pre-Closing Period**" means the period from the date of this Agreement through the Closing Date.

"**Product**" means any product or service covered by the scope of any Valid Claim contained in any Acquired Patent.

"**Recommendation**" has the meaning set forth in Section 5.3(b) of this Agreement.

"**Registered IP**" means all Intellectual Property Rights that are registered, filed, or issued under the authority of any Governmental Body, including all patents, registered copyrights, registered mask works, and registered trademarks and all applications for any of the foregoing.

"**Related Agreements**" means the Escrow Agreement, the Voting Agreement, the Consulting Agreements (including the Proprietary Information Assignment Agreement attached as an exhibit thereto), the Bill of Sale, the General Assignment and Assumption Agreement, the Assignment of Patent Rights, the Assignment of Co-Owned Patent Rights, the Amended Pittsburgh License, the Innovation Works Agreement, the Assignment of Trademarks and any other agreements executed in connection with this Agreement or the Transactions.

"**Representatives**" include a Person's officers, directors, employees, agents, attorneys, accountants, advisors and representatives.

"**Required Cellatope Stockholder Approval**" has the meaning set forth in Section 3.13(a) of this Agreement.

"**Response**" has the meaning set forth in Section 10.5(b) of this Agreement.

"**Securities Act**" has the meaning set forth in Section 2.6 of this Agreement.

"**Set-Off Funds**" has the meaning set forth in Section 10.2(b) of this Agreement.

"**Straddle Period Tax**" has the meaning set forth in Section 6.7 of this Agreement.

"**Tax**" means any tax (including any income tax, franchise tax, capital gains tax, gross receipts tax, value-added tax, surtax, excise tax, ad valorem tax, transfer tax, stamp tax, sales tax, use tax, property tax, business tax, withholding tax or payroll tax), levy, assessment, tariff, duty (including any customs duty), deficiency or fee, and any related charge or amount (including any

fine, penalty or interest), imposed, assessed or collected by or under the authority of any Governmental Body.

"**Tax Return**" means any return (including any information return), report, statement, declaration, estimate, schedule, notice, notification, form, election, certificate or other document or information filed with or submitted to, or required to be filed with or submitted to, any Governmental Body in connection with the determination, assessment, collection or payment of any Tax or in connection with the administration, implementation or enforcement of or compliance with any Legal Requirement relating to any Tax.

"**Technology**" means the Cell Bound Complement Activation Products technology.

"**Termination Date**" has the meaning set forth in Section 9.1(f) of this Agreement.

"**University of Pittsburgh**" has the meaning set forth in Section 7.5(ix) of this Agreement.

"**Threshold**" has the meaning set forth in Section 10.3(a) of this Agreement.

"**Transactions**" has the meaning set forth in Section 2.1(b) of this Agreement.

"**Valid Claim**" means an unexpired claim of an issued Patent within the Acquired Patents that has not been abandoned, permanently revoked or held to be unpatentable, invalid or unenforceable by a final decision of a court of competent jurisdiction, which decision can no longer be appealed.

"**Voting Agreement**" has the meaning set forth in the Recitals to this Agreement.

"**Works**" has the meaning set forth in Exhibit A to this Agreement.

Exhibit 10.8

AMENDMENT NO. ONE TO ASSET PURCHASE AGREEMENT
BETWEEN CYPRESS BIOSCIENCE, INC. AND CELLATOPE CORPORATION

This Amendment No. One is made as of this 14th day of December by and between Exagen Diagnostics, Inc. ("Exagen"), a Delaware corporation and successor-in-interest to Cypress Bioscience, Inc. ("Cypress"), and Cellatope Corporation Liquidating Trust (the "Trust"), a trust formed pursuant to a certain Agreement and Declaration of Trust dated February 27, 2009 between Cellatope Corporation ("Cellatope") and the Trustee and successor-in-interest to Cellatope, which, with Cypress, was party to that certain Asset Purchase Agreement, dated as of February 9, 2009 (the "Agreement"). Each of Exagen and the Trust is sometimes referred to herein as a "party," and together Exagen and the Trust are sometimes referred to herein as "parties." Capitalized terms used but not defined herein shall have the respective meanings given to such terms in the Agreement.

RECITALS

WHEREAS, pursuant to the Agreement, Cypress purchased from Cellatope the Acquired Assets, which included certain assets and rights with respect to, or necessary for the manufacture, use or sale of, any Lupus Monitoring Product;

WHEREAS, pursuant to the Agreement, Exagen, as the successor in interest to Cypress, is obligated, under certain circumstances, to make payments to the Trust, including the Annual Payments, as the successor-in-interest to Cellatope; and

WHEREAS, in consideration of the Trust's willingness to forgo receipt of any Annual Payments under the Agreement in connection with this Amendment No. One, the parties wish to amend certain provisions of the Agreement;

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. Amendment and Restatement of Section 2.2(a). Section 2.2(a) of the Agreement is amended and restated to read as follows:

2.2 Milestone Consideration.

(a) Within 10 business days after the First Commercial Sale by Cypress, any of its Affiliates or any Licensee of a Product for monitoring of Systemic Lupus Erythematosus (a "***Lupus Monitoring Product***") (the "***Milestone***"), Cypress shall notify Cellatope in writing (the "***Milestone Notice***") that the Milestone has been achieved and the date on which it was achieved. Within 20 business days of achievement of the Milestone, Cypress shall issue to Cellatope a promissory note (the "***Note***") in the principal amount of $3,000,000 (subject to any reduction in such amount pursuant to Section 10.6), the form of which is attached

hereto as Exhibit A-1. The Note shall be unsecured and shall bear interest at the rate of 5% per annum. Interest shall accrue for the twelve-month period following issuance of the Note. On the first anniversary of the date of issuance of the Note, accrued interest for the previous 12 months shall be added to the principal amount of the Note, which adjusted amount shall thereafter bear interest at 5% per annum. Thereafter, Cypress shall make equal monthly payments representing principal and accrued interest, each month continuing for **48** months after such first anniversary, at which point any unpaid balance of the Note will be due and payable in full. Notwithstanding anything herein to the contrary, the parties acknowledge and agree that in the event the Milestone is not achieved or if Cypress terminates development pursuant to Section 2.2(c) below, no payments shall be due under this Agreement and Cypress shall not be required to issue the Note. Amounts payable pursuant to the Note are referred to herein as the "***Milestone Consideration***." For avoidance of doubt, only a Product for monitoring of Systemic Lupus Erythematosus, and not any Product designed for diagnosis of Systemic Lupus Erythematosus without a monitoring function, shall constitute a Lupus Monitoring Product.

2. Amendment of Section 2.2(b) and Related Provisions. The first paragraph of Section 2.2(b) of the Agreement is amended to read as follows:

Cypress shall act in good faith and use commercially reasonable efforts to cause the Milestone to be achieved; *provided*, *however*, that the obligation of Cypress to use commercially reasonable efforts to achieve the Milestone shall not require that the Milestone ever be achieved if doing so, in any case, would require Cypress to use more than commercially reasonable efforts and, *provided*, *further*, that a termination of development by Cypress of all Lupus Monitoring Products pursuant to Section 2.2(c) below shall not be deemed a failure by Cypress to use, or otherwise violate Cypress' obligations to use, commercially reasonable efforts to develop a Lupus Monitoring Product. The parties acknowledge and agree that Cypress may terminate development of all Lupus Monitoring Products at any time if achieving the Milestone would require Cypress to use more than commercially reasonable efforts to do so, and that any such termination may occur without requiring that Cypress also terminate the Amended Pittsburgh License in accordance with Section 2.2(c) below. Cypress shall provide notice to Cellatope of its determination to terminate development of all Lupus Monitoring Products because achieving the Milestone would require Cypress to use more than commercially reasonable efforts to do so within 15 days of making such determination, including reasonable details supporting such determination and, in such case, Cypress shall comply with the provisions of Section 2.2(c)(ii) below. The parties further acknowledge and agree that nothing in this Agreement shall prohibit Cypress from engaging in a change of control-type transaction or a sale or license of all or any of the Acquired Assets, *provided* that in the event that Cypress desires to consummate a Change of Control after the Closing Date while the Milestone has not been attained but remains eligible to be attained, or the Note has been issued but not yet been paid in full, Cypress shall cause the Entity acquiring Cypress (or acquiring substantially all of its assets) with respect to a Change of Control (the "***Acquirer***") to assume Cypress' obligations under Section 2.2 of this Agreement, subject to all of the limitations and qualifications contained in Section 2.2 of this Agreement (including that such Acquirer use commercially reasonable efforts and the right of such Acquirer to terminate development of all Lupus Monitoring Products). With respect to any Change of Control, Cypress shall not consummate such Change of Control unless (i) Cypress remains liable for Cypress' payment obligations with respect to the

Milestone Consideration and the Acquirer otherwise assumes Cypress' obligations in Section 2.2 in a form and substance reasonably acceptable to Cellatope (*provided*, that Cellatope's prior acceptance or approval shall not be required if such assumption is unqualified), in which case the parties acknowledge and agree that, following any such assumption (unless Cypress is merged with the Acquirer and remains the surviving Entity or becomes a subsidiary of the Acquirer), Cypress shall have no further liability or obligation, whether primarily or secondarily, with respect to the obligations in Section 2.2 hereunder, except for the payment obligations with respect to the Milestone Consideration or (ii) the Acquirer is an Applicable Public Company and assumes Cypress' obligations under Section 2.2 of this Agreement in a form and substance reasonably acceptable to Cellatope (*provided*, that Cellatope's prior acceptance or approval shall not be required if such assumption is unqualified), in which case the parties acknowledge and agree that, following any such assumption (unless Cypress is merged with the Acquirer and remains the surviving Entity or becomes a subsidiary of the Acquirer), Cypress shall have no further liability or obligation, whether primarily or secondarily, with respect to the obligations in Section 2.2 hereunder, including the payment obligations with respect to the Milestone Consideration.

3. Amendment of Section 2.2(b)(ii). Section 2.2(b)(ii) is amended to read as follows:

(ii) Cellatope may allege that Cypress is not using commercially reasonable efforts to achieve the Milestone at any time by providing written notice to Cypress to such effect, including reasonable details supporting such allegation, and setting forth specific reasonable actions that Cellatope requests that Cypress take with respect to its efforts to achieve the Milestone. If Cellatope provides any such notice, each party shall appoint an executive officer or other authorized person to discuss, and attempt to resolve, the alleged failure to perform to both parties' satisfaction. These Persons shall, by phone or in person, discuss the alleged failure to perform in good faith within 15 days after Cellatope provides the applicable notice. If, within 30 days after Cellatope provides the applicable notice, the two executive officers have not reached a mutually acceptable resolution to the alleged failure to perform, Cellatope may submit the matter to arbitration conducted by one arbitrator mutually agreeable to Cypress and Cellatope. In the event that, within 30 days after submission of any dispute to arbitration, Cypress and Cellatope cannot mutually agree on one arbitrator, then the parties shall arrange for the American Arbitration Association to designate a single arbitrator in accordance with the rules of the American Arbitration Association. Any such arbitration shall be held in San Diego County, California, under the rules and procedures then in effect of the American Arbitration Association. The arbitrator shall determine how all expenses relating to the arbitration shall be paid, including the respective expenses of each party, the fees of the arbitrator and the administrative fee to the American Arbitration Association. The arbitrator shall set a limited time period and establish procedures designed to reduce the cost and time for discovery while allowing Cypress and Cellatope an opportunity, adequate in the sole judgment of the arbitrator, to discover relevant information from the opposing party about the alleged failure to perform. The arbitrator shall rule upon motions to compel or limit discovery and shall have the authority to impose sanctions, including attorneys' fees and costs, to the same extent as a competent court of law or equity, should the arbitrator determine that discovery was sought without substantial justification or that discovery was refused or objected to without substantial justification. The

arbitrator's decision shall be limited to the precise question of whether Cypress has used commercially reasonable efforts to achieve the Milestone and the specific actions, if any, to be taken by Cypress that are necessary for Cypress to meet its obligation to use such commercially reasonable efforts, and shall be subject to the limitations set forth in this Agreement and be final, binding and conclusive upon the parties. The parties acknowledge and agree that Cypress may, in lieu of taking the actions, if any, specified by the arbitrator as being necessary for Cypress to meet its obligation to use commercially reasonable efforts, pay to Cellatope the Milestone Consideration in accordance with this Section 2. The arbitrator's decision shall be written and shall be supported by written findings of fact and conclusions. The parties acknowledge and agree that the dispute resolution mechanism and remedy set forth in this Section 2.2(b)(ii) shall be the sole and exclusive method of dispute resolution and remedy available to the parties with respect to disputes arising under Section 2.2(b), and that the provisions of Section 10 shall be inapplicable to any dispute arising under Section 2.2(b).

4. Amendment of Sections 2.2(c). The first paragraph of Section 2.2(c) of the Agreement is amended to read as follows:

(c) The parties also acknowledge and agree that, subject to Section 2.2(c)(i) and (ii) below, Cypress may terminate development of all Lupus Monitoring Products at any time prior to achievement of the Milestone by terminating the Amended Pittsburgh License in accordance with its terms and conditions, and, upon such termination, Cypress' obligations to use commercially reasonable efforts to cause the Milestone to be achieved under Section 2.2(b) shall terminate. In the event that Cypress terminates development of all Lupus Monitoring Products, Cypress shall:

5. Amendment of Section 2.2(d). Section 2.2(d) of the Agreement is amended to read as follows:

(d) During the time that Cypress is actively developing any Lupus Monitoring Product, (i) annually, on or before January 30 of each calendar year occurring after 2012, and (ii) semi-annually, upon request of Cellatope, Cypress shall provide Cellatope with a written summary describing in reasonable detail the status of achieving the Milestone. Any summaries or other information provided by Cypress to Cellatope pursuant to this Section 2.2(d) shall be governed by the Mutual Non-Disclosure Agreement dated April 21, 2008 by and between Cypress and Cellatope or (y) such other agreement as shall have identical terms and conditions, to the extent Cypress shall require the execution thereof by Cellatope as a condition precedent to providing such report(s) (the "***Confidentiality Agreement***").

5. Amendment of Section 2.2(e). Section 2.2(e) of the Agreement is deleted, and any and all references to such deleted provisions of former Section 2.2(e) of the Agreement shall be of no further force and effect.

6. Relabeling of Section 2.2(f). Section 2.2(f) of the Agreement is relabeled as Section 2.2(e).

7. Amendment and Restatement of Section 2.2(g). Section 2.2(g) of the Agreement is relabeled as Section 2.2(f) and is amended and restated to read as follows:

(f) During the period beginning on the Closing Date and ending on the earlier of the date of payment in full of the Milestone Consideration or the termination of development of all Lupus Monitoring Products (the "***Payment Period***"), Cypress shall keep (and shall cause its Affiliates and Licensees to keep) records pertaining to the development of Lupus Monitoring Products in sufficient detail to permit Cellatope to confirm whether the Milestone has been achieved and the accuracy and completeness of any summaries provided pursuant to Section 2.2(d). Such records shall be maintained for a period of at least one year after the Payment Period (and for the duration of any period in which the process contemplated by Section 2.2(b)(ii) shall be pending). During the Payment Period and for one year thereafter, Cellatope shall have the right to inspect such records, which inspection rights may be exercised during normal business hours upon reasonable prior written notice to Cypress and, in each case, no more than once a calendar year. Cellatope shall bear the full cost of any such inspection, unless such inspection discloses a payment failure by Cypress of the Milestone Consideration payable under Section 2.2(a), in which case, Cypress shall bear the reasonable cost of the inspection. Information disclosed pursuant to this Section 2.2(f) shall be governed by the Confidentiality Agreement.

8. Section References. All references in the Agreement to sections that have been relabeled by this Amendment No. One shall be deemed to refer to such sections, as relabeled.

9. Capacity of Parties. The parties acknowledge that they are the successors-in-interest of the original parties to the Agreement that they are bound by the provisions of the Agreement, as amended by this Amendment No. One and that, references in the Agreement, as amended by this Amendment No. One, to Cypress shall be deemed to include Exagen for all purposes, and references to Cellatope shall be deemed to include the Trust for all purposes.

10. Dissolution of Trust. The parties acknowledge that the Trust may be dissolved prior to the end of the Payment Period and that its assets, including its rights and obligations under the Agreement, may be distributed to the beneficiaries of the Trust. At or before the time of such dissolution, each beneficiary of the Trust for itself and its successors, shall appoint an individual as such beneficiary's agent and attorney-in-fact (the "***Beneficiaries' Representative***"), with full power and authority in the name of and for and on behalf of such beneficiary to act on behalf of such beneficiary for purposes of the Agreement. The Beneficiaries' Representative shall exercise all power and authority granted to or required by Cellatope under the Agreement. The Beneficiaries' Representative will have full power and authority to act on the beneficiaries' behalf in any dispute, litigation, arbitration or other matter involving the Agreement. A decision, act, consent or instruction of the Beneficiaries' Representative shall constitute a decision of all of the Beneficiaries and shall be binding and conclusive on each Beneficiary and their successors. Exagen agrees that following receipt of appropriate documentation and instructions from the trustee of the Trust prior to dissolution of the Trust or, following such dissolution; from the Beneficiaries' Representative, it will make payments of the Milestone Consideration to the persons and in the respective amounts as instructed by the trustee or the Beneficiaries' Representative.

11. Notice. For purposes of Section 11.4 of the Agreement (Notice), each of Cellatope's and Cypress' addresses and facsimile numbers (and those of any party required to be provided copies of notices under such section) are set forth on the signature pages hereto.

12. Miscellaneous. Except as expressly amended hereby, the Agreement remains in full force and effect in accordance with the terms thereof. This Amendment No. One will be construed in accordance with and governed in all respects by, the internal laws of the State of California (without giving effect to principals of conflicts of laws) and may be executed in multiple counterparts, each of which will constitute an original and all of which, when taken together, will constitute one agreement.

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the parties have executed this Amendment No. One as of the date first written above.

EXAGEN DIAGNOSTICS, INC.

By /s/ Ron Rocca
Name: Ron Rocca, CEO

Exagen Diagnostics, Inc.
801 University Blvd. SE, Suite 103
Albuquerque, NM 87106
Attn: CEO
Fax: 505.272.7965

with copy to (which copy shall not constitute notice):

Brownstein Hyatt Farber Schreck, LLP
201 Third Street NW
Albuquerque, NM 87102
Attn: Bonnie J. Paisley
Fax: 505-244-9266

CELLATOPE CORPORATION LIQUIDATING TRUST

By /s/ Richard Labuda
Name: Richard Labuda, Trustee

Cellatope Corporation Liquidating Trust
320 Osprey Court
Wexford, PA 15090
Attention: Trustee

with a copy to (which copy shall not constitute notice):

Buchanan Ingersoll & Rooney PC
301 Grant Street, 20th Floor
One Oxford Centre
Pittsburg, PA 15219
Attn: Perry S. Patterson
Fax: 412.562.1041

EXHIBIT A-1

PROMISSORY NOTE

$3,000,000 **[Date]**

Subject to the terms and conditions of this Note, for value received, Exagen Diagnostics, Inc., a Delaware corporation (the "Borrower"), hereby promises to pay to Cellatope Corporation Liquidating Trust, a liquidating trust formed under the laws of the State of Delaware, or its assigns (the "Lender"), the principal sum of Three Million Dollars and Zero Cents ($3,000,000) (the "Principal Amount"), together with interest thereon accruing on and from the date hereof until the entire balance is paid, at an annual rate equal to 5% (the "Interest Rate"). Interest shall be calculated based on a 365-day year, compounded annually, but in no event shall the rate of interest exceed the maximum rate, if any, allowable under applicable law. Payments of principal and interest shall be due within ten days after the end of each month beginning with the month in which the first anniversary of the date of issuance of this Note occurs.

1. Terms of Note. This Note is issued pursuant to, and is subject to the terms, and entitled to the benefits of, the Asset Purchase Agreement, dated as of February 9, 2009, as amended, modified or supplemented from time to time, including, without limitation, by Amendment No. One dated December , 2012 (the "Asset Purchase Agreement"), between the Borrower as successor-in-interest to Cypress Bioscience, Inc. and, the Lender (as successor-in-interest of Cellatope Corporation). Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Asset Purchase Agreement.

2. Interest; Adjustment to Principal. This Note was issued within 20 days after the First Commercial Sale. The initial principal amount of this Note is $3,000,000, and that amount will accrue interest for 12 months from the date of issuance at the Interest Rate. On the first anniversary of the date of issuance of this Note, the accrued interest for such 12-month period, in the amount of $150,000, will be added to the principal amount of the Note. Such adjusted principal amount will thereafter bear interest at the applicable Interest Rate until the Note is paid in full. Such payments will be due within ten days after the end of each month.

3. Payments; Maturity. Equal monthly payments representing principal and interest on this Note, will be payable beginning within ten days after the last day of the month that is 12 months after the date of issuance of the Note and continuing for 48 months, at which point all accrued interest and any unpaid principal balance shall be due and payable in full. All payments made under this Note will be applied first, to the most recent amount of accrued interest and principal required to be paid, second, against any overdue amounts, and lastly, pursuant to Section 4.

4. Prepayment. This Note may be prepaid at any time, without premium or penalty, in whole or in part. Any prepayment of this Note shall be applied to installments of the principal

amount in the inverse order of maturity. Following any prepayment of this Note, the interest amounts payable on this Note shall be adjusted accordingly.

5. Remedy. Upon any default in payment of any amount due hereunder, and if such default continues for thirty (30) days after the Lender notifies Borrower of the same, a penalty in the amount of five percent (5%) of such overdue payment shall be added to the overdue payment and shall be immediately due and payable. Additionally, if Borrower (a) defaults with respect to any six or more payments due under this Note (and if each such default continues for thirty (30) days after the Lender notifies Borrower of the same) in any one calendar year or (b) defaults in payment of any amount due under this Note and such default continues for a period of six (6) months after the original due date for such amount, then upon notice to Borrower, (x) all principal and accrued but unpaid interest shall become immediately due and payable and (y) such aggregate amount shall thereafter be assessed the penalty amount set forth in the first sentence of this Section 5, after which such amount shall accrue interest in accordance with Section 1 hereof. This Note is unsecured.

6. Amendments. This Note may not be amended except by a written instrument duly executed and delivered by Borrower and Lender.

7. Assignment. This Note may be assigned in accordance with the terms of the Asset Purchase Agreement and Amendment No. One thereto.

8. Replacement of Note. Upon receipt by the Borrower of evidence reasonably satisfactory to it of ownership of and the loss, theft, destruction or mutilation of this Note, and (a) in the case of loss, theft or destruction of indemnity reasonably satisfactory to it, or (b) in the case of mutilation, upon surrender and cancellation of this Note, the Borrower, at its own expense, shall execute and deliver a new Note, dated and bearing interest from the date to which interest shall have been paid on this lost, stolen, destroyed or mutilated Note or dated the date of this lost, stolen, destroyed or mutilated Note if no interest shall have been paid hereon.

9. Collection Expenses. The Borrower further agrees, subject only to any limitation imposed by applicable law, to pay all expenses, including reasonable attorneys' fees, incurred by the holder of this Note in endeavoring to collect any amounts payable hereunder which are not paid when due.

10. Payments in U.S. Dollars. All payments of principal and interest with respect to this Note are to be made in lawful money of the United States of America.

11. Governing Law. This Note shall be deemed to be a contract made under the laws of the State of California, and for all purposes shall be governed by and construed in accordance with the laws of the State of California without regard to principles of conflicts of law hereof.

12. Notices. All notices and demands for payment shall be given in the manner specified in the Asset Purchase Agreement.

IN WITNESS WHEREOF, the Borrower has caused this Note to be duly executed and delivered as a sealed instrument on the date set forth above by the duly authorized representative of the Borrower.

EXAGEN DIAGNOSTICS, INC.

By _____
Name:
Title:

Exhibit 10.9

AMENDMENT NO. TWO TO ASSET PURCHASE AGREEMENT
BETWEEN CYPRESS BIOSCIENCE, INC. AND
CELLATOPE CORPORATION

This Amendment No. Two is made as of this eleventh day of January, 2017, by and between Exagen Diagnostics, Inc. *("Exagen")*, a Delaware corporation and successor-in-interest to Cypress Bioscience, Inc. *("Cypress")*, and Cellatope Corporation Liquidating Trust (the *"Trust")*, a trust formed pursuant to a certain Agreement and Declaration of Trust dated February 27, 2009 between Cellatope Corporation *("Cellatope")* and the Trustee and successor-in-interest to Cellatope, which, with Cypress, was party to that certain Asset Purchase Agreement, dated as of February 9, 2009 (the *"Original Agreement")*. The Original Agreement was amended by the parties pursuant to Amendment No. One on December 14, 2012 (the Original Agreement, as amended by Amendment No. One, the *"Agreement")*. Each of Exagen and the Trust is sometimes referred to herein as a "party," and together Exagen and the Trust are sometimes referred to herein as the "parties." Capitalized terms used but not defined herein shall have the respective meanings given to such terms in the Agreement.

RECITALS

WHEREAS, pursuant to the Agreement, Cypress purchased from Cellatope the Acquired Assets, which included certain assets and rights with respect to, or necessary for the manufacture, use or sale of, any Lupus Monitoring Product;

WHEREAS, pursuant to the Agreement, Exagen, as the successor in interest to Cypress, is obligated, under certain circumstances, to make payments to the Trust, as the successor-in-interest to Cellatope; and

WHEREAS, in order to better align the payment obligations with the potential economic opportunities of the Lupus Monitoring Product, the parties wish to amend certain provisions of the Agreement to restructure the payments required to be made to the Trust;

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. Amendment and Replacement of Section 2.2. Section 2.2 of the Agreement is deleted in its entirety and replaced with the following:

2.2 Milestone and Royalties.

(a) Within 10 business days after the First Commercial Sale by Cypress, any of its Affiliates or any Licensee of a Product for monitoring of Systemic Lupus Erythematosus (a *"Lupus Monitoring Product')* (the *"Milestone")*, Cypress shall notify Cellatope in writing

(the *"Milestone Notice')* that the Milestone has been achieved and the date on which it was achieved (the *"Milestone Date").* For avoidance of doubt, only a Product for monitoring of Systemic Lupus Erythematosus, and not any Product designed for diagnosis of Systemic Lupus Erythematosus without a monitoring function, shall constitute a Lupus Monitoring Product.

(b) Cypress shall act in good faith and use commercially reasonable efforts to cause the Milestone to be achieved; *provided, however,* that the obligation of Cypress to use commercially reasonable efforts to achieve the Milestone shall not require that the Milestone ever be achieved if doing so, in any case, would require Cypress to use more than commercially reasonable efforts and, *provided, further,* that a termination of development by Cypress of all Lupus Monitoring Products pursuant to Section 2.2(c) below shall not be deemed a failure by Cypress to use, or otherwise violate Cypress' obligations to use, commercially reasonable efforts to develop a Lupus Monitoring Product. The parties acknowledge and agree that Cypress may terminate development of all Lupus Monitoring Products at any time if achieving the Milestone would require Cypress to use more than commercially reasonable efforts to do so, and that any such termination may occur without requiring that Cypress also terminate the Amended Pittsburgh License in accordance with Section 2.2(c) below. Cypress shall provide notice to Cellatope of its determination to terminate development of all Lupus Monitoring Products because achieving the Milestone would require Cypress to use more than commercially reasonable efforts to do so within 15 days of making such determination, including reasonable details supporting such determination and, in such case, Cypress shall comply with the provisions of Section 2.2(c)(ii) below. The parties further acknowledge and agree that nothing in this Agreement shall prohibit Cypress from engaging in a change of control-type transaction or a sale or license of all or any of the Acquired Assets, *provided* that in the event that Cypress desires to consummate a Change of Control after the Closing Date while the Milestone has not been attained but remains eligible to be attained, or any Royalty payment obligations remain, Cypress shall cause the Entity acquiring Cypress (or acquiring substantially all of its assets) with respect to a Change of Control (the *"Acquirer')* to assume Cypress' obligations under Section 2.2 of this Agreement, subject to all of the limitations and qualifications contained in Section 2.2 of this Agreement (including that such Acquirer use commercially reasonable efforts and the right of such Acquirer to terminate development of all Lupus Monitoring Products). With respect to any Change of Control, Cypress shall not consummate such Change of Control unless (i) Cypress remains liable for Cypress' payment obligations with respect to the Royalty and the Acquirer otherwise assumes Cypress' obligations in a form and substance reasonably acceptable to Cellatope *(provided,* that Cellatope's prior acceptance or approval shall not be required if such assumption is unqualified), in which case the parties acknowledge and agree that, following any such

assumption (unless Cypress is merged with the Acquirer and remains the surviving Entity or becomes a subsidiary of the Acquirer), Cypress shall have no further liability or obligation, whether primarily or secondarily, with respect to the obligations in Section 2.2 hereunder, except for the payment obligations with respect to the Royalty payments or (ii) the Acquirer is an Applicable Public Company and assumes Cypress' obligations under Section 2.2 of this Agreement in a form and substance reasonably acceptable to Cellatope *(provided,* that Cellatope's prior acceptance or approval shall not be required if such assumption is unqualified), in which case the parties acknowledge and agree that, following any such assumption (unless Cypress is merged with the Acquirer and remains the surviving Entity or becomes a subsidiary of the Acquirer), Cypress shall have no further liability or obligation, whether primarily or secondarily, with respect to the obligations in Section 2.2 hereunder, including the payment obligations with respect to the Royalties.

(i) For purposes of this Section 2.2(b), *"commercially reasonable efforts"* means the use of efforts, expertise and resources normally used by Cypress for other product candidates, which, as compared with the Product candidates for Lupus Monitoring Products acquired by Cypress in connection with the Transactions (the *"Lupus Monitoring Product Candidates'),* are of similar market potential at a similar stage in their development, taking into account all reasonable relevant factors affecting the cost, risk and timing of development and the total potential of the Lupus Monitoring Product Candidates, all as measured by the facts and circumstances at the time such efforts are due.

(ii) Cellatope may allege that Cypress is not using commercially reasonable efforts to achieve the Milestone at any time by providing written notice to Cypress to such effect, including reasonable details supporting such allegation, and setting forth specific reasonable actions that Cellatope requests that Cypress take with respect to its efforts to achieve the Milestone. If Cellatope provides any such notice, each party shall appoint an executive officer or other authorized person to discuss, and attempt to resolve, the alleged failure to perform to both parties' satisfaction. These Persons shall, by phone or in person, discuss the alleged failure to perform in good faith within 15 days after Cellatope provides the applicable notice. If, within 30 days after Cellatope provides the applicable notice, the two executive officers have not reached a mutually acceptable resolution to the alleged failure to perform, Cellatope may submit the matter to arbitration conducted by one arbitrator mutually agreeable to Cypress and Cellatope. In the event that, within 30 days after submission of any dispute to arbitration, Cypress and Cellatope cannot mutually agree on one arbitrator, then the parties shall arrange for the American Arbitration Association to designate a single arbitrator in accordance with the rules of the American Arbitration Association. Any such arbitration shall be held in San

Diego County, California, under the rules and procedures then in effect of the American Arbitration Association. The arbitrator shall determine how all expenses relating to the arbitration shall be paid, including the respective expenses of each party, the fees of the arbitrator and the administrative fee to the American Arbitration Association. The arbitrator shall set a limited time period and establish procedures designed to reduce the cost and time for discovery while allowing Cypress and Cellatope an opportunity, adequate in the sole judgment of the arbitrator, to discover relevant information from the opposing party about the alleged failure to perform. The arbitrator shall rule upon motions to compel or limit discovery and shall have the authority to impose sanctions, including attorneys' fees and costs, to the same extent as a competent court of law or equity, should the arbitrator determine that discovery was sought without substantial justification or that discovery was refused or objected to without substantial justification. The arbitrator's decision shall be limited to the precise question of whether Cypress has used commercially reasonable efforts to achieve the Milestone and the specific actions, if any, to be taken by Cypress that are necessary for Cypress to meet its obligation to use such commercially reasonable efforts, and shall be subject to the limitations set forth in this Agreement and be final, binding and conclusive upon the parties. The parties acknowledge and agree that Cypress may, in lieu of taking the actions, if any, specified by the arbitrator as being necessary for Cypress to meet its obligation to use commercially reasonable efforts, pay to Cellatope the Maximum Royalty in accordance with this Section 2. The arbitrator's decision shall be written and shall be supported by written findings of fact and conclusions. The parties acknowledge and agree that the dispute resolution mechanism and remedy set forth in this Section 2.2(b)(ii) shall be the sole and exclusive method of dispute resolution and remedy available to the parties with respect to disputes arising under Section 2.2(b), and that the provisions of Section 10 shall be inapplicable to any dispute arising under Section 2.2(b).

(c) The parties also acknowledge and agree that, subject to Section 2.2(c)(i) and (ii) below, Cypress may terminate development of all Lupus Monitoring Products at any time prior to achievement of the Milestone by terminating the Amended Pittsburgh License in accordance with its terms and conditions, and, upon such termination, Cypress' obligations to use commercially reasonable efforts to cause the Milestone to be achieved under Section 2.2(b) shall terminate. In the event that Cypress terminates development of all Lupus Monitoring Products, Cypress shall:

(i) if such termination occurs in connection with the termination of the Amended Pittsburgh License, provide the University of Pittsburgh and Cellatope with written notice not less than 10 days prior thereto of its intent to terminate the Amended Pittsburgh License in accordance with its terms and conditions; and

(ii) take such reasonable actions as may be requested by Cellatope, at Cellatope's cost and expense, to transfer to Cellatope any discoveries, know-how, data and technical information owned, Controlled or developed by Cypress related to any Lupus Monitoring Product and necessary for the development or commercialization of such Lupus Monitoring Product (the *"Cypress IP");* provided, however, that to the extent that Cypress determines, in its reasonable discretion, that any such Cypress IP relates to any product developed by Cypress, being developed by Cypress or that Cypress reasonably expects to develop, Cypress shall retain ownership or control rights in such Cypress IP such that Cypress shall be entitled to retain and use such Cypress IP for its independent use and Cypress shall be deemed to have granted to Cellatope a perpetual, royalty-free limited license to use such Cypress IP solely for use in developing and commercializing Lupus Monitoring Products, all on such other terms to be agreed to by the parties.

(d) During the time that Cypress is actively developing any Lupus Monitoring Product, (i) annually, on or before January 30 of each calendar year occurring after 2012, and (ii) semi-annually, upon request of Cellatope, Cypress shall provide Cellatope with a written summary describing in reasonable detail the status of achieving the Milestone. Any summaries or other information provided by Cypress to Cellatope pursuant to this Section 2.2(d) shall be governed by the Mutual Non-Disclosure Agreement dated April 21, 2008, by and between Cypress and Cellatope or (y) such other agreement as shall have identical terms and conditions, to the extent Cypress shall require the execution thereof by Cellatope as a condition precedent to providing such report(s) (the "*Confidentiality Agreement*").

(e) Upon attainment of the Milestone, Cypress shall pay Cellatope a royalty equal to 7.5% of Net Sales of the Lupus Monitoring Product as set forth in this Section 2.2(e) (the "*Royalty*").

(i) Within 20 business days of achievement of the Milestone, Cypress shall make a prepayment of Royalties of $100,000 (the *"Royalty Prepayment").* The Royalty Prepayment shall be fully creditable against the Royalties.

(ii) "*Net Sales"* shall mean, with respect to a particular time period, the total cash amounts collected during such time period by Cypress or any of its Affiliates or any Licensee for services or testing using the Lupus Monitoring Product, less deductions for refunds or rebates of previously collected amounts where applicable. In the event the Lupus Monitoring

Product is sold or used in a product, service or process that includes at least one additional marker that is not covered by the Lupus Monitoring Product (a *"Combination Product")*, the Net Sales for such Combination Product shall be calculated by multiplying the actual Net Sales of such Combination Product by the fraction A/(A+B), where A is the published Medicare allowable rate at the end of the reported quarter for the Lupus Monitoring Product, and B is the published Medicare allowable rate at the end of the reported quarter for all other components or products in the Combination Product. If the Lupus Monitoring Product and/or the other components or products of the Combination Product do not correspond with Medicare allowable rates, Net Sales for the Combination Product shall be determined by the parties in good faith and such agreement shall be reduced to writing by both parties.

(iii) The Royalty will cumulate (A) from the Milestone Date through December 31, 2020, and be payable to Cellatope not later than February 1, 2021, (B) from January 1, 2021 through December 31, 2021 and be payable to Cellatope not later than February 1, 2022, (C) from January 1, 2022 through December 31, 2022 and be payable to Cellatope not later than February 1, 2023, and (D) from January 1, 2023 through December 31, 2023 and be payable to Cellatope not later than February 1, 2024. The Royalty Prepayment shall be credited against each of the foregoing Royalty payments until applied in full. Each payment of Royalties will be accompanied by a statement of the calculation of the Net Sales and Royalties for the applicable payment period and any application of the Royalty Prepayment against the amount of Royalties otherwise payable.

(iv) The obligation of Cypress to accrue Royalties payable to Cellatope expires and shall be of no further effect on the earlier of (A) the payment of Royalties to Cellatope that cumulate to $3,000,000 (the *"Maximum Royalty"*) or (B) January 1, 2024 (the earlier of (A) or (B), the *"Royalty Expiration Date"*).

(v) All cash payments hereunder shall be payable in U.S. dollars.

(vi) Notwithstanding anything herein to the contrary, the parties acknowledge and agree that in the event the Milestone is not achieved or if Cypress terminates development pursuant to Section 2.2(c) above, no Royalty payment or prepayment shall be due under this Agreement.

(f) During the period beginning on the Closing Date and ending on the earlier of the Royalty Expiration Date or the termination of development of all Lupus Monitoring Products (the *"Reporting Period"),* Cypress shall keep (and shall cause its Affiliates and Licensees to keep) records pertaining to the development of Lupus Monitoring Products in sufficient detail to permit Cellatope to confirm whether the Milestone has been achieved, the accuracy and completeness of any summaries provided pursuant to Section 2.2(d) and the calculation of Net Sales and Royalties. Such records shall be maintained for a period of at least one year after the Reporting Period (and for the duration of any period in which the process contemplated by Section 2.2(b)(ii) shall be pending). During the Reporting Period and for one year thereafter, Cellatope shall have the right to inspect such records, which inspection rights may be exercised during normal business hours upon reasonable prior written notice to Cypress and, in each case, no more than once a calendar year. Cellatope shall bear the full cost of any such inspection, unless such inspection discloses that Cypress underpaid any Royalty payable under Section 2.2(e) by more than 5%, in which case, Cypress shall bear the reasonable cost of the inspection. Information disclosed pursuant to this Section 2.2(f) shall be governed by the Confidentiality Agreement.

2. Amendment of Section 11.9. The last sentence of Section 11.9 of the Agreement is deleted in its entirety and replaced with the following:

   Cellatope shall not be permitted to assign any of its rights or delegate any of its obligations under this Agreement without Cypress' prior written consent, provided that, Cellatope, or any liquidating trust established by Cellatope from and after the Closing, may assign its rights or delegate any of its obligations to any or all of the stockholders of Cellatope or beneficiaries of any such liquidating trust.

3. Promissory Note. All references to the "Note," and the form of the Promissory Note attached as Exhibit A-1 to the Agreement, are hereby deleted in their entirety and are of no further force or effect.

4. Section References. All references in the Agreement to sections that have been deleted and replaced by this Amendment No. Two shall be deemed to refer to such sections, as replaced.

5. Miscellaneous. Except as expressly amended hereby, the Agreement remains in full force and effect in accordance with the terms thereof. The parties acknowledge and agree that the Agreement, as amended by this Amendment No. Two, sets forth the entire understanding and intentions of the parties hereto as to the subject matter hereof and supersede all previous understandings between the parties, written or oral, regarding such subject matter. This Amendment No. Two will be construed in accordance with, and governed in all respects by, the internal laws of the State of California (without giving effect to principles of conflicts of laws) and may be executed in multiple counterparts, each of which will constitute an original and all of which, when taken together, will constitute one agreement.

IN WITNESS WHEREOF, the parties have executed this Amendment No. Two as of the date first written above.

EXAGEN DIAGNOSTICS, INC.	CELLATOPE CORPORATION LIQUIDATING TRUST
By: /s/ Wendy Rollstin	By: /s/ Edward L. Erickson
Name: Wendy Rollstin	Name: Edward L. Erickson
Title: EVP and CFO	Title: Trustee

Exhibit 10.10

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

ASSET PURCHASE AGREEMENT

between:

CYPRESS BIOSCIENCE, INC.,
a Delaware corporation;

PROPRIUS, INC.,
a Delaware corporation;

and

EXAGEN DIAGNOSTICS, INC.,
a Delaware corporation

Dated as of October 8, 2010

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ASSET PURCHASE AGREEMENT

This Asset Purchase Agreement is being entered into as of October 8, 2010, by and between: **CYPRESS BIOSCIENCE, INC.**, a Delaware corporation ("***Seller***"); **PROPRIUS, INC.**, a Delaware corporation and wholly-owned subsidiary of Seller ("***Subsidiary***"); and **EXAGEN DIAGNOSTICS, INC.**, a Delaware corporation ("***Purchaser***"). Seller and Subsidiary, on the one hand, and Purchaser, on the other hand, are referred to collectively in this Agreement as the "***Parties.***" Certain other capitalized terms used in this Agreement are defined in **Exhibit A**.

RECITAL

Seller and Subsidiary are in the business (among other businesses) of developing and marketing diagnostic and drug products. Seller and Subsidiary wish to sell and the Purchaser wishes to purchase the Diagnostic Business, and the Parties wish to provide for such purchase and certain related transactions, on the terms and subject to the conditions and other provisions set forth in this Agreement.

AGREEMENT

The Parties, intending to be legally bound, agree as follows:

1. SALE AND PURCHASE OF ASSETS; RELATED TRANSACTIONS.

1.1 Sale and Purchase of Assets. On the terms and subject to the conditions and other provisions set forth in this Agreement, at the Closing, Seller and Subsidiary hereby sell, assign and transfer to Purchaser, and Purchaser hereby purchases from Seller and Subsidiary, all of the following (which, subject to Section 1.2, are referred to in this Agreement as the "***Assets***"):

(a) all of Seller's and Subsidiary's rights and interests as of the Closing Date in and to the Patents;

(b) all of Seller's and Subsidiary's rights and interests as of the Closing Date in and to the Trademarks;

(c) all of Seller's and Subsidiary's rights and interests as of the Closing Date in and to the Know-How;

(d) all of Seller's and Subsidiary's rights as of the Closing Date under the Contracts, including the right to the security deposit held by the landlord pursuant to the lease for the Facility;

(e) all of Seller's and Subsidiary's rights and interests as of the Closing Date in and to the Equipment;

(f) all of the fixtures and furnishings owned by Seller or Subsidiary as of the Closing Date that are located and used primarily at the Facility;

(g) all sales, marketing and promotional materials owned by Seller or Subsidiary as of the Closing Date that are located at the Facility;

(h) all inventories, work-in-process inventories, product-in-transit inventories and other inventories of the Existing Products, and all inventories designated exclusively for use in the manufacture of the Existing Products, that are located at the Facility and owned by Seller or Subsidiary as of the Closing Date;

(i) all Acquired Xifin Accounts Receivable and Post-10/5 Accounts Receivable;

(j) all laboratory supplies, reagents and related laboratory materials owned by Seller or Subsidiary as of the Closing Date that are located at the Facility and all antibodies owned by Seller or Subsidiary and used in the Diagnostic Business that are stored offsite, to the extent freely transferable (subject to applicable contractual use restrictions);

(k) all of Seller's and Subsidiary's rights and interests as of the Closing Date in and to the Web Site IP; and

(l) those records of Seller and Subsidiary, as they exist on the Closing Date, that only relate to the Existing Products or the Diagnostic Business (and do not relate to Seller's or Subsidiary's other businesses or assets) (it being understood that such records will not be subject to any restrictions on their use by Purchaser and that Seller and Subsidiary may, subject to the provisions regarding confidentiality, retain copies of such records).

1.2 Excluded Assets. Notwithstanding anything to the contrary contained in Section 1.1 or elsewhere in this Agreement, neither Seller nor Subsidiary will be required to sell or transfer to Purchaser, and the Assets will not be deemed to include, any of the following or any right or interest in or to any of the following:

(a) any accounts receivable that are not either Acquired Xifin Accounts Receivable or Post-10/5 Accounts Receivable;

(b) any cash or cash equivalents;

(c) the telephone server, telephone system and copier/printer located at the Facility; or

(d) any other assets, rights or interests that are not included as Assets pursuant to Section 1.1.

1.3 Purchase Price. As consideration for the sale of the Assets to Purchaser:

(a) at the Closing, Purchaser will pay (without deduction or setoff of any nature) by wire transfer of immediately available funds: (i) to Seller, $[***] and (ii) to Subsidiary $[***] (the aggregate amount paid to Seller and Subsidiary pursuant to clauses (i) and (ii), the "***Initial Cash Payment***");

(b) at the Closing, subject to the terms and conditions of this Agreement, Purchaser hereby assumes the Assumed Liabilities, each of Seller and Subsidiary hereby transfers, assigns and delegates to Purchaser the Assumed Liabilities, and Purchaser hereby absolutely and unconditionally accepts such transfer, assignment and delegation and assumes and agrees to pay, honor, perform, discharge and become liable for all Assumed Liabilities;

(c) on the earlier of (i) the second anniversary of the date hereof (the "***Second Cash Payment Date***") or (ii) the first date on which a Trigger Event occurs requiring payment pursuant to Section 1.9, Purchaser will, subject to Section 10.17, pay to Seller, by wire transfer of immediately available funds, the sum of $[***] (the "***Second Cash Payment***");

(d) for each of the following contingent milestones (each, a "***Milestone***"), subject to Section 10.17, Purchaser will pay by wire transfer of immediately available funds the following payments, each of which shall be payable only once, and only for the first achievement of such Milestone:

(i) within five (5) business days after the achievement of the [***] Milestone, Purchaser will pay to Subsidiary the [***] Milestone Amount;

(ii) within five (5) business days after the achievement of the [***] Milestone, Purchaser will pay to Subsidiary the [***] Milestone Amount;

(iii) within five (5) business days after the achievement of the CB- CAPS Monitoring Assay [***] Milestone, Purchaser will pay to Seller the sum of $[***]; and

(iv) within thirty (30) days after the end of the month in which the CB- CAPS Annual Sales Milestone is first achieved, Purchaser will pay to Seller the sum of $[***];

(e) Beginning on the date of the First Commercial Sale of the first CB-CAPS Product in any country and ending on the [***] anniversary of such date, Purchaser shall, subject to Section 10.17, pay to Seller royalties of [***]% of the Net Sales of each CB- CAPS Product anywhere in the world occurring during such period;

(f) Beginning on the Closing Date and ending on the [***] anniversary of such date, Purchaser shall, subject to Section 10.17, pay to Subsidiary royalties of [***]% of the Net Sales of any Avise MCV Product and any Avise PG Product, occurring during such period anywhere in the United States of America and Mexico;

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(g) Purchaser shall, subject to Section 10.17, pay to Subsidiary royalties of [***]% of the Net Sales of any New Product, for sales occurring during the period beginning on the date of the First Commercial Sale of each such New Product and ending on [***] (for purposes of clarity, the Parties acknowledge and agree that, until the end of the applicable Royalty Term set forth in Section 1.3(e) or (f), as applicable, any New Product that may also be deemed an Existing Product shall be paid the royalties set forth in Section 1.3(e) or (f), as applicable, without duplication of royalties set forth in this Section 1.3(g) and, following the end of such applicable royalty term, the royalties set forth in this Section 1.3(g) shall apply); and

(h) Within 14 days after the delivery of each monthly reconciliation contemplated by Section 1.8(f) of this Agreement, Seller or Subsidiary, as applicable, shall, subject to Section 10.17, pay to Purchaser an amount equal to (i) [***]% multiplied by all amounts received pursuant to Acquired Xifin Accounts Receivable during such month plus (ii) [***]% multiplied by the amount of license royalties paid by Purchaser under any Contracts which are attributable to such accounts receivable during such month plus (iii) [***]% multiplied by the amount of the collection fee (which amount shall not exceed [***]% of the amount collected) paid by Purchaser to Xifin with respect to such accounts receivable during such month. For accounts receivable for testing services performed by Purchaser with a date of service of October 6, 2010 or later (as defined by the blood sample draw date) (the "***Post-10/5 Accounts Receivable***"), the Parties shall, subject to Section 10.17, follow the procedures set forth under "***Post-10/5 Accounts Receivable***" in **Schedule 5.8**.

Purchaser shall pay all royalty amounts payable pursuant to Sections 1.3(e), (f) and (g) above within [***] days after the end of each fiscal quarter during the applicable term of each such royalty in U.S. Dollars calculated using the conversion rates published in the Wall Street Journal on the day nearest the last business day of the calendar quarter.

1.4 Tax Matters; Allocation of Purchase Price.

(a) The Parties will use commercially reasonable efforts to agree upon an allocation of the consideration referred to in Section 1.3, plus the amount of the Assumed Liabilities included in the amount realized on the sale of the Assets for federal income Tax purposes, among the Assets (the "***Allocation***") as soon as possible after the Closing Date (but at least within 45 days following the Closing Date). The Allocation will be determined in a manner consistent with this Section 1.4 and Section 1060 of the Internal Revenue Code of 1986 (the "***Code***") and the Treasury Regulations thereunder. The Allocation will be conclusive and binding upon the Parties for Tax purposes, each Party will file all returns and reports relating to Taxes, including without limitation Form 8594, consistent with the Allocation, and neither Party will take or permit any of its Affiliates or representatives to take any position on any Tax return, with any taxing authority or in any judicial Tax proceeding that is inconsistent with the Allocation except as required by a final determination within the meaning of Section 1313(a) of the Code or any corresponding provision of any applicable state or local law. Each Party will promptly provide the other Party with any additional information required to complete Form 8594. Each Party will timely notify the other Party, and will timely provide the other Party with reasonable assistance, in the event of an examination, audit or other proceeding regarding the Allocation.

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) Purchaser shall reimburse each of Seller and Subsidiary for 50% of the amount of any sales taxes, use taxes, transfer taxes, documentary charges, recording fees, filing fees or similar taxes, charges, fees or expenses (collectively, "***Transfer Taxes***") that may become payable in connection with the sale of the Assets to Purchaser, the assumption by Purchaser of the Assumed Liabilities or any of the other transactions contemplated by this Agreement. The Parties will cooperate to the extent commercially reasonable to minimize the Transfer Taxes.

(c) All real property taxes, personal property taxes, ad valorem obligations, similar recurring taxes and fees, general assessments and special assessments imposed on or with respect to the Assets ("***Property Taxes***") for any Straddle Period shall be prorated between Seller and Subsidiary, on one hand, and Purchaser, on the other hand, as of the close of business on the Closing Date on a daily basis. Seller and Subsidiary shall be responsible for all such Property Taxes accruing under such daily proration methodology for the portion of the Straddle Period up to and including the Closing Date. Purchaser shall be responsible for all such Property Taxes accruing under such daily proration methodology for the portion of the Straddle Period beginning on the day after the Closing Date. The Party responsible for filing returns relating to Property Taxes for a Straddle Period shall file such returns but shall be entitled to reimbursement for any Property Taxes that are allocable to the other Party under this Section 1.4(c).

1.5 Security and Subordination Agreements; Ancillary Agreements. At the Closing,

(a) Purchaser will execute and deliver to Seller an Intellectual Property Security Agreement in substantially the form of **Exhibit B** (the "***Intellectual Property Security Agreement***") and will deliver to Seller a Subordination Agreement in substantially the form of **Exhibit C** (the "***Subordination Agreement***") validly executed by Los Alamos National Bank; and

(b) the Parties will enter into the following additional agreements (together with the agreements contemplated in Section 1.5(a) above, the "***Ancillary Agreements***"):

(i) the Consent to Assignment in substantially the form of **Exhibit D** (the "***Consent to Assignment***"), which document shall be validly executed by Seller, Purchaser and Landlord;

(ii) the Assignment and Assumption of Lease Agreements in substantially the form of **Exhibit E** (the "***Lease Assumption***"), which document shall be validly executed by Seller and Purchaser; and

(iii) the Assignment and Assumption Agreement in substantially the form of **Exhibit F**, which document shall be validly executed by Seller, Purchaser and [***].

1.6 Closing. The closing of the purchase of the Assets by Purchaser (the "***Closing***") will take place at the offices of Cooley LLP, 4401 Eastgate Mall, San Diego, California 92121, at a time and on a date to be designated by the Parties, which will be as promptly as practicable following the satisfaction or waiver of the last to be satisfied or waived of the conditions set forth in Sections 6 and 7 (other than those conditions that by their nature are to be satisfied at the

Closing). For purposes of this Agreement, "***Closing Date***" means the date as of which the Closing actually takes place.

1.7 Diligence Obligations.

(a) Purchaser shall act in good faith and shall use commercially reasonable efforts, and shall cause its Affiliates and Licensees to act in good faith and use commercially reasonable efforts, to (i) cause each of the Milestones to be achieved, including, as applicable, [***] with [***] and [***] discussions and negotiations to attempt to agree upon mutually satisfactory agreements relating to the [***] Commercial Program and the [***] Commercial Program, timely preparing and filing all documents necessary and diligently pursuing all filings necessary to achieve each Milestone, and developing, commercializing and selling CB-CAPS Products, (ii) develop, commercialize and sell Products subject to the Royalty Transactions, and (iii) collect, or cause to be collected, the Acquired Xifin Accounts Receivable. In addition, Purchaser [***].

1.8 Records; Audits; Reports.

(a) During the Royalty Term for a Product and for a period of one year thereafter, Purchaser shall keep, and shall cause its Affiliates, Licensees and Distributors to keep, complete and accurate records pertaining to the Royalty Transactions for such Product or other disposition of such Product in sufficient detail to permit Seller to confirm the accuracy of the payments for such Royalty Transactions. For a period ending one year after payment of a Milestone, Purchaser shall keep, and shall cause its Affiliates, Licensees and Distributors, if applicable, to keep, complete and accurate records pertaining to the progress toward achievement of such Milestone in sufficient detail to permit Seller to confirm the diligence of Purchaser's efforts and progress towards achieving such Milestone. During the Acquired Xifin Accounts Term and for a period of one year thereafter, Purchaser shall keep, and shall cause its Affiliates and Licensees to keep, complete and accurate records pertaining to the collection of Acquired Xifin Accounts Receivable (including those contemplated by **Schedule 5.8**) in sufficient detail to permit Seller to confirm the accuracy of Purchaser's payments to Seller of the amount set forth in Section 1.3(h) and Purchaser's allocation of such amounts to the specific tests performed, and, in addition, Purchaser shall permit Seller to have access, during normal business hours, to all documentation (including without limitation test reports and patient- and physician-related information) that is in the possession of Purchaser, its Affiliates and its and their agents and service providers and that is reasonably useful to Seller to respond to any insurance-related inquiry with respect to any accounts receivable arising prior to January 12, 2010.

(b) Until the end of the Royalty Term for a Product and for a period of one year thereafter, until payment of a particular Milestone and for a period of one year thereafter, and until the end the Acquired Xifin Accounts Term and for a period of one year thereafter, Seller shall have the right to cause an independent, certified public accountant, reasonably acceptable to Purchaser, to audit such records to confirm the amounts payable to Seller pursuant to Section 1.3

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(for periods covering not more than the preceding three years); *provided, however*, Seller may not exercise the foregoing right more than once every calendar year. Such audits may be conducted during normal business hours upon reasonable prior written notice to Purchaser and its Affiliates, Licensees, or Distributors, as applicable. If the audit reveals that Purchaser has failed to accurately calculate any payment to Seller due under this Agreement, then Purchaser shall promptly pay to Seller any resulting amounts due hereunder, or Seller shall promptly refund overpayments made by Purchaser, each together with interest calculated in the manner provided in Section 1.11. Seller shall bear the full cost of each such audit unless such audit discloses an underpayment by Purchaser of at least $[***] and which is [***]% or more of the amount of payments due under this Agreement for any two quarter period covered by such audit, in which case Purchaser shall bear the full cost of such audit and shall reimburse Seller within five (5) business days of receiving a notice from Seller setting forth the fees and expenses for the applicable audit.

(c) During the Royalty Term, Purchaser shall furnish to Seller a written report within [***] days after the end of each fiscal quarter (each such period, a "***Reporting Period***") showing, in reasonably-specific detail:

(i) the Net Sales (including reasonably specific detail as to the amounts of any deductions or credits applied to calculate Net Sales and the basis therefor) on a Product-by-Product and country-by-country basis of all Products sold by Purchaser, its Affiliates, Licensees and Distributors during the Reporting Period;

(ii) the royalties payable in U.S. Dollars, if any, which shall have accrued pursuant to Royalty Transactions, on a per-Royalty Transaction basis, during the Reporting Period; and

(iii) the exchange rates used in determining the amount of U.S. Dollars due to Seller on Net Sales.

(d) Until such time as a Milestone is achieved or such time as the Parties agree in writing that such Milestone will not be achieved, by no later than the the 30th day following each of June 30 and December 31 for each year during such period (beginning with December 31, 2010), Purchaser shall provide to Seller a summary report setting out (i) reasonable details relating to Purchaser's activities in such six month (or shorter, with respect to the period from the Closing Date to December 31, 2010) period directed toward achieving such Milestone, (ii) the extent to which such Milestone has been accomplished, and (iii) Purchaser's future expectations as to achieving such Milestone.

(e) Purchaser shall provide Seller with copies of any agreement that Purchaser or its Affiliates enter into with [***] or [***] relating to the [***] Commercial Program or the [***] Commercial Program, respectively. Any such agreement with [***] or [***] shall include a covenant by [***] or [***], as applicable, that Purchaser or its Affiliate shall receive, and shall be entitled to deliver to Seller, the information necessary to determine if the [***] Milestone or the [***] Milestone, as applicable, has been achieved (including, without limitation, client reports from [***] that show enrollment in the [***] Commercial Program

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and the historical weekly average of clients enrolled in such program). Purchaser or its Affiliate shall promptly deliver such information to Seller upon receipt.

(f) During the Acquired Xifin Accounts Term, Purchaser shall furnish Seller a reconciliation report within [***] days after the end of each month (each such month, an "***Accounts Reporting Period***") showing, in reasonably-specific detail:

(i) the amounts collected with respect to all Acquired Xifin Accounts Receivable by Seller, Subsidiary and their agents and service providers during the Accounts Reporting Period, broken out by specific test performed (which tests shall include, without limitation, the Avise PG Product and the Avise MCV Product);

(ii) the amount of royalties paid with respect to collections of Acquired Xifin Accounts Receivable by Purchaser, its Affiliates and its and their agents and service providers during the Accounts Reporting Period broken out by payee, including without limitation Orgentec Diagnostika GmbH and Prometheus Laboratories Inc.; and

(iii) the amount of the Xifin collection fees associated with Xifin's collection of such Acquired Xifin Accounts Receivable.

1.9 Acceleration of Payment.

(a) If any Trigger Event occurs prior to the date on which Purchaser pays the Second Cash Payment to Seller, the Second Cash Payment shall become immediately due and payable on the date of such Trigger Event. If any Trigger Event described in clauses (ii) through (vi) of Section 1.9(b) below occurs prior to Purchaser's payment of a Milestone to Seller, any such unpaid Milestone shall become immediately due and payable on the date of such Trigger Event.

(b) A "***Trigger Event***" shall mean the occurrence of any of the following events:

(i) The consummation of any Change of Control;

(ii) Purchaser dissolves, liquidates or terminates its existence as a going business concern;

(iii) Purchaser files any petition or action for relief under any bankruptcy, reorganization, insolvency or moratorium law or any other law for the relief of, or relating to, debtors, now or hereafter in effect, or makes any assignment for the benefit of creditors or takes any corporate action in furtherance of any of the foregoing;

(iv) an involuntary petition is filed against Purchaser (unless such petition is dismissed or discharged within 60 days under any bankruptcy statute now or hereafter in effect), or a custodian, receiver, trustee, assignee for the benefit of

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creditors (or other similar official) is appointed to take possession, custody or control of any property of Purchaser;

(v) a breach of any of the negative covenants set forth in Section 5.10; or

(vi) Purchaser is in default of its obligations under any of the Junior Lienholder Loan Documents and the Junior Lienholder elects to demand payment thereunder as a result of such default.

1.10 Assumption of Obligations in Change of Control. In the event Purchaser experiences a Change of Control, Purchaser shall cause the Person acquiring Purchaser (or acquiring or exclusively licensing substantially all of its assets) with respect to a Change of Control to assume Purchaser's obligations under this Agreement, including, without limitation, those obligations with respect to the Second Cash Payment, the Milestones, the Assumed Liabilities, the royalties paid for Royalty Transactions, and the Acquired Xifin Accounts Receivable.

1.11 Late Payments. In the event that any payment due hereunder is not made when due, the payment shall accrue interest from the date due at the rate of [***]% per month; *provided, however*, that in no event shall such rate exceed the maximum legal annual interest rate; and provided, further, that no interest shall be due pending resolution of a good faith dispute with respect to such underpayment in accordance with Section 9.3(c) or Section 9.3(d) hereof (it being understood and agreed among the Parties that, in the event it is determined in connection with the resolution of any such dispute that one Party owed payment to the other under this Agreement and failed to pay when due, interest shall accrue on these overdue payments under this Section 1.11 from the date when such payments should have been made under this Agreement). The payment of such interest shall not limit a Party from exercising any other rights it may have as a consequence of the lateness of any payment.

2. REPRESENTATIONS AND WARRANTIES OF SELLER AND SUBSIDIARY.

Each of Seller and Subsidiary represents and warrants to Purchaser that, except as set forth in the Seller Disclosure Schedule:

2.1 Title to Assets. As of the Closing Date, Seller and Subsidiary, together, will have good and valid title to the Assets, free and clear of any liens or encumbrances, except for (i) any lien for current taxes not yet due and payable, (ii) liens and encumbrances referred to in the Contracts and (iii) minor liens and encumbrances that have arisen in the ordinary course of business and that do not materially detract from the value of the Assets subject thereto.

2.2 Patents and Know-How.

(a) Each of the Patents is owned solely by Seller or Subsidiary. Seller has made available to Purchaser copies of the Patents, and has supplied to Purchaser copies of the patent applications included in the Patents that are not publicly available as of the date of this Agreement. To Seller's knowledge, there are no intellectual property rights owned or controlled by any third party necessary to make, use, sell, offer for sale and import the Existing Products, as they currently exist, other than those intellectual property rights to be transferred, licensed or

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sublicensed to Purchaser pursuant to this Agreement. Neither Seller nor Subsidiary has received any written claim of infringement of any intellectual property rights of any Person arising out of the development, manufacture, use, sale, offer for sale or import of the Existing Products by Seller or Subsidiary. To Seller's knowledge, each of Seller and Subsidiary has complied with its obligation under 37 CFR §1.56(a) to disclose to the United States Patent and Trademark Office, during the pendency of any United States patent application included in the Patents, information known to Seller to be material to the patentability of the pending claims in such application.

(b) Neither Seller nor Subsidiary has granted any Person a license that is currently in effect under any of the Patents for any purpose.

(c) None of the Patents is involved in any interference or opposition proceeding, and, to Seller's knowledge, no such proceeding is being threatened with respect to any of the Patents.

(d) Seller has disclosed trade secrets of Seller included in the Know-How only to Persons that have executed written confidentiality agreements governing the use or disclosure of such trade secrets, except to the extent Seller disclosed such information in connection with making filings related to any Assets or Products with governmental or regulatory authorities.

(e) Seller has required all professional and technical employees who provided services to Seller or Subsidiary in connection with the Diagnostic Business or the Patents or Know-How to execute agreements under which such employees were required to convey to Seller or Subsidiary ownership of all inventions and developments conceived or created by them in the course of their employment with Seller. To Seller's knowledge, none of the activities of Seller's professional and technical employees who are providing services to Seller in connection with the Diagnostic Business and the Patents and Know-How is violating any agreement between any such employees and their former employers.

2.3 Contracts; Real Property Leases; Equipment; Certain Materials.

(a) Seller has made available to Purchaser true and correct copies of each of the contracts identified on **Schedule 1**. Each contract identified on **Schedule 1** is valid and in full force and effect. Neither Seller nor Subsidiary is in material breach of any contract identified on **Schedule 1**, and, to Seller's knowledge, no other party to any such contract is in material breach of such contract.

(b) The contracts identified on **Schedule 1** include the real property leases pursuant to which Seller has the right to occupy the Facility. All security deposits required to be made by Seller under such real property leases have been made by Seller, and no portion of such security deposits has been applied to any default by Seller under any of such real property leases. Seller has the right to occupy the Facility in accordance with the terms of such real property leases. Seller is not in material breach of any such real property lease identified on **Schedule 1**, and, to Seller's knowledge, no other party to any such real property lease is in material breach of such contract.

(c) There are no laboratory supplies, reagents or related laboratory materials owned by Seller or Subsidiary at a location other than the Facility that relate exclusively to the Diagnostic Business.

2.4 Compliance with Legal Requirements.

(a) Each of Seller and Subsidiary is in compliance with all Legal Requirements relating to the Diagnostic Business. Since January 1, 2009, neither Seller nor Subsidiary has received any written notice from any governmental body alleging any failure to comply with any Legal Requirement relating to the Diagnostic Business and the employment of the Specified Employees, except for any such notice relating to a failure to comply that has since been cured.

(b) To Seller's knowledge, at all times prior to January 1, 2009, each of Seller and Subsidiary was in compliance with all Environmental Laws applicable to the Diagnostic Business, the Facility and Seller's operations at the Facility. Each of Seller and Subsidiary is, and has been at all times since January 1, 2009, in compliance with all Environmental Laws applicable to the Diagnostic Business, the Facility and Seller's operations at the Facility. To Seller's knowledge, no event has occurred or condition exists or has existed which would reasonably be expected to give rise to any material liability on the part of Purchaser pursuant to, or to materially impair Purchaser's compliance with, any Environmental Law applicable to the Assets and the Facility. The Facility has not been listed or, to Seller's knowledge, proposed for listing on the National Priorities List established by the United States Environmental Protection Agency, or any similar federal or state list. To Seller's knowledge, no material lien has attached to any of Seller's or Subsidiary's property at the Facility pursuant to any Environmental Law.

(c) There has not been any action taken by Seller or Subsidiary, operating practice by Seller or Subsidiary or failure by Seller or Subsidiary to act that would reasonably be expected to give rise to a material liability on the part of Purchaser as a result of:

(i) the handling, storage, use, presence, transportation or disposal or arranging for transportation or disposal of any Hazardous Substance by Seller or Subsidiary in, on, under, near or from the Facility;

(ii) any emission, discharge or release of any Hazardous Substance by Seller or Subsidiary on or from the Facility into or upon the air, surface water, ground water or land;

(iii) any disposal, handling, manufacturing, processing, distribution, use, treatment or transport of any Hazardous Substances by Seller or Subsidiary on or from the Facility; or

(iv) the presence of any Hazardous Substances (including asbestos, urea formaldehyde foam installation or similar substances contained in building materials) in or on the Facility.

(d) Seller and Subsidiary, together, hold all registrations, permits, licenses and approvals issued by or on behalf of any federal, state or local government body that are required pursuant to any Environmental Laws for the occupancy of and the conduct of business at the

Facility and the ownership of the Assets ("***Environmental Permits***"). Any such Environmental Permits held by Seller or Subsidiary are currently in full force and effect. Each of Seller and Subsidiary is in compliance with all terms and conditions of such Environmental Permits, and with all other applicable limitations, restrictions, conditions, standards, prohibitions, requirements, obligations, schedules and timetables contained in Environmental Laws.

(f) To Seller's knowledge, no underground storage tanks or surface impoundments exist at the Facility.

(g) Neither Seller nor Subsidiary has, either expressly or by operation of law, assumed or undertaken any liability or corrective, investigatory or remedial obligation of any other Person relating to any Environmental Laws that would reasonably be expected to result in a material liability to Purchaser.

(h) Seller has made available to Purchaser copies of any environmental reports, audits, permits, licenses, registrations and other environmental, health or safety documents relating to the Assets and the Facility that are in Seller's or Subsidiary's possession or control.

2.5 Regulatory Matters.

(a) The licensure, certifications and/or accreditations of the laboratory at the Facility under the Clinical Laboratory Improvement Amendments of 1988, as amended, the 48 contiguous states of the United States and the College of American Pathologists are in full force and effect. Seller has made available to Purchaser copies of all governmental correspondence (including copies of official notices, citations or decisions) in Seller's or Subsidiary's files relating to the Existing Products.

(b) Each of Seller and Subsidiary is in compliance with the laws applicable to the development, manufacture, labeling, testing and distribution of the Existing Products (at the Facility and otherwise) and the operation of manufacturing facilities used to manufacture the Existing Products, and with all applicable regulations, policies and procedures promulgated by the FDA with respect thereto. Neither Seller nor Subsidiary has received any written notice that any recalls, field notifications or seizures have been ordered or, to Seller's knowledge, threatened by any governmental body with respect to any of the Existing Products. Neither Seller nor Subsidiary has received a warning letter or other similar written notice from the FDA regarding the Existing Products or the manufacturing facilities used to manufacture the Existing Products, except for written notices regarding matters that have since been cured, corrected or resolved.

2.6 Employee Matters. Seller has made available to Purchaser (except to the extent prohibited under applicable Legal Requirements) accurate information with respect to the employment of, the job responsibilities of, the compensation payable by Seller to and the employee benefits being provided to each of the Specified Employees. As of the date of this Agreement, there are approximately 4 employees of Seller based at the Facility.

2.7 Certain Liabilities. As of the date of this Agreement, neither Seller nor Subsidiary has any material liabilities relating to the Assets, the Existing Products or the Specified Employees other than (i) liabilities under or relating to the contracts and other instruments identified on **Schedule 1**, (ii) liabilities incurred in the ordinary course of business or

consistent with past practices, (iii) liabilities referred to in, or relating to matters referred to in, the Seller Disclosure Schedule, (iv) liabilities under applicable Legal Requirements, and (v) liabilities disclosed in any of Seller's publicly filed materials. Purchaser is not assuming any liabilities other than the Assumed Liabilities.

2.8 Legal Proceedings. There is no lawsuit or other legal proceeding pending or, to Seller's knowledge, being threatened against Seller or Subsidiary as of the date of this Agreement that involve the Diagnostic Business or would reasonably be expected to result in a judgment having a material adverse effect on the value of the Diagnostic Business taken as a whole.

2.9 Authority; Binding Nature of Agreement. Each of Seller and Subsidiary has all necessary corporate power and authority to execute and deliver this Agreement and the Ancillary Agreements to which it is a party and to perform its obligations under this Agreement and the Ancillary Agreements to which it is a party; and the execution, delivery and performance by Seller and Subsidiary of this Agreement and the Ancillary Agreements to which it is a party have been duly authorized by all necessary action on the part of Seller, Subsidiary and their respective boards of directors. No vote of the holders of Seller's common stock is required to authorize the transactions contemplated by this Agreement. This Agreement constitutes the valid and binding obligation of each of Seller and Subsidiary, enforceable against each of Seller and Subsidiary in accordance with its terms, subject to (i) laws of general application relating to bankruptcy, insolvency and the relief of debtors and (ii) rules of law governing specific performance, injunctive relief and other equitable remedies. Upon execution thereof, the Ancillary Agreements to which it is a party will constitute the valid and binding obligation of Seller, enforceable against Seller in accordance with its terms, subject to (i) laws of general application relating to bankruptcy, insolvency and the relief of debtors and (ii) rules of law governing specific performance, injunctive relief and other equitable remedies.

2.10 Non-Contravention; Consents. Assuming the Consents referred to in Part 2.10 of the Seller Disclosure Schedule are obtained, neither the execution, delivery or performance by Seller or Subsidiary of this Agreement or the Ancillary Agreements to which it is a party, nor the consummation of any of the transactions contemplated hereby will: (a) conflict with or result in any violation of any provision of the certificate of incorporation, bylaws or other charter or organizational documents of Seller or Subsidiary, (b) result in a breach or default by Seller or Subsidiary under any Contract, (c) result in a violation of any Legal Requirement or order to which Seller or Subsidiary is subject, or (d) result in the imposition of any lien or encumbrance upon any of the Assets (other than to the extent provided for in the Intellectual Property Security Agreement). Except as set forth in Part 2.10 of the Seller Disclosure Schedule, neither Seller nor Subsidiary is required to obtain any Consent from any Person, under any Contract, at or prior to the Closing in connection with the execution and delivery of this Agreement or any of the Ancillary Agreements to which it is a party or the sale of the Assets to Purchaser.

2.11 Financial Statements for the Diagnostic Business.

(a) Seller has delivered to Purchaser the schedule of the unaudited actual costs and cash collections of the Diagnostic Business at December 31, 2009 (the "***December***

Financial Information"). The December Financial Information is true and correct in all material respects.

(b) Seller has delivered to Purchaser a schedule of the unaudited actual costs, cash collections and a schedule of fixed assets of the Diagnostic Business as at August 31, 2010 (the "***August Financial Information***"). The August Financial Information is true and correct in all material respects.

2.12 Absence of Changes. Since August 31, 2010, there has not been any material adverse change in the Assets or Diagnostic Business (including the liabilities, operations, financial performance or prospects thereof).

2.13 Sufficiency of Assets. The Assets constitute all of the material assets necessary to operate the Diagnostic Business in the manner presently operated by Seller.

3. REPRESENTATIONS AND WARRANTIES OF PURCHASER.

Purchaser represents and warrants to Seller as follows:

3.1 Due Organization. Purchaser is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware.

3.2 Financial Statements.

(a) The Purchaser has delivered to the Seller the following financial statements and notes (collectively, the "***Purchaser Financial Statements***"):

(i) Purchaser's unaudited balance sheet at December 31, 2009 and audited statements of income and cash flow for the twelve months ending December 31, 2009; and

(ii) Purchaser's unaudited balance sheet as at August 31, 2010 (the "***Statement Date***") and unaudited consolidated statements of income and cash flow for the eight month period ending on the Statement Date.

(b) The Purchaser Financial Statements have been prepared in accordance with generally accepted accounting principles applied on a consistent basis throughout the periods indicated, except as disclosed therein, and present fairly the financial condition and position and operating results and cash flows of the Purchaser as of December 31, 2009 and the Statement Date; *provided*, *however*, that the unaudited financial statements are subject to normal recurring year-end audit adjustments (which are not expected to be material either individually or in the aggregate), and do not contain all footnotes required under generally accepted accounting principles.

3.3 Absence of Changes. Since August 31, 2010, there has not been any material adverse change in the business, condition, capitalization, assets (tangible or intangible), liabilities, operations, financial performance or prospects of Purchaser.

3.4 Authority; Binding Nature of Agreement. Purchaser has all necessary power and authority to execute and deliver this Agreement and the Ancillary Agreements to which it is party, and to perform its obligations hereunder and thereunder; and the execution, delivery and performance by Purchaser of this Agreement and the Ancillary Agreements to which it is a party have been duly authorized by all necessary action on the part of Purchaser and its board of directors. Purchaser has provided to Seller a copy of the resolutions of the board of directors of Purchaser authorizing the execution, delivery and performance by Purchaser of this Agreement and the Intellectual Property Security Agreement. No vote of the holders of Purchaser's capital stock (or any class or series thereof) is required to authorize the purchase by Purchaser of the Assets or any of the other transactions contemplated by this Agreement or the Ancillary Agreements to which it is a party. This Agreement constitutes, and, upon execution thereof, the Ancillary Agreements to which it is a party will constitute, the valid and binding obligation of Purchaser, enforceable against Purchaser in accordance with its terms, subject to (i) laws of general application relating to bankruptcy, insolvency and the relief of debtors, and (ii) rules of law governing specific performance, injunctive relief and other equitable remedies.

3.5 Non-Contravention; Consents. Neither the execution, delivery or performance by Purchaser of this Agreement or the Ancillary Agreements to which it is a party, nor the consummation of any of the transactions contemplated by this Agreement or the Ancillary Agreements to which it is a party, will (a) conflict with or result in any violation of any provision of the certificate of incorporation, bylaws or other charter or organizational documents of Purchaser, (b) result in a breach or default by Purchaser under any material contract to which Purchaser is a party, (c) result in a violation of any Legal Requirement or order to which Purchaser is subject or (d) except as contemplated by the Intellectual Property Security Agreement and the lien of the Junior Lienholder, result in the creation of a lien or encumbrance on any material asset of Purchaser, including the Assets. Purchaser is not and will not be required to obtain any Consent from any Person in connection with the execution, delivery or performance of this Agreement or the Ancillary Agreements to which it is a party or the consummation of any of the transactions contemplated hereby or thereby.

3.6 Availability of Funds. Purchaser has, and on the Closing Date will have, sufficient funds available to finance and consummate the transactions contemplated by this Agreement.

4. PRE-CLOSING COVENANTS.

4.1 Access. Subject to the provisions of the Confidentiality Agreement and to applicable Legal Requirements, during the period from the date of this Agreement through the Closing Date (the "***Pre-Closing Period***"), Seller will, after receiving reasonable advance notice from Purchaser, give Purchaser reasonable access (during normal business hours) to the Facility and to Seller's and Subsidiary's books and records relating only to the Diagnostic Business, and will provide Purchaser with such information regarding the Diagnostic Business and any other appropriate matters germane to the subject matter of this Agreement as Purchaser may reasonably request, for the sole purposes of enabling Purchaser (i) to further investigate, at Purchaser's sole expense, the Diagnostic Business and any other appropriate matters germane to the subject matter of this Agreement and (ii) to verify the accuracy of the representations and warranties set forth in Section 2; *provided, however*, that except as provided in Section 5.2,

Purchaser will not (without Seller's approval, which will not be unreasonably withheld) contact or otherwise communicate with any of the Seller's employees. To the extent requested by Purchaser, Seller will arrange to permit Purchaser to conduct interviews of any of the Specified Employees during the Pre-Closing Period.

4.2 Conduct of Diagnostic Business. Until the earlier of the Closing Date and the close of business on October 15, 2010, except (i) as contemplated or permitted by this Agreement or the Seller Disclosure Schedule, (ii) as may be necessary to carry out any of the transactions contemplated by this Agreement, (iii) as may be necessary to facilitate compliance with any Legal Requirement or the requirements of any Contract, or (iv) as approved by Purchaser, during the Pre-Closing Period:

(a) Seller will conduct its operations at the Facility in the ordinary course and consistent with its past practices, to the extent such operations relate to the Diagnostic Business and Assets; and

(b) neither Seller nor Subsidiary will (i) license or dispose of any material Assets, (ii) prematurely terminate or amend, grant a sublicense under or assign any of the Contracts, or (iii) commit a breach of any Contract entered into after the date of this Agreement.

If Seller requests Purchaser's approval of a proposed action that would result in a breach by Seller or Subsidiary of this Section 4.2, Purchaser will respond promptly to Seller's request and will not unreasonably withhold or delay its approval of the proposed action.

4.3 Consents. Each of Seller and Subsidiary will use commercially reasonable efforts during the Pre-Closing Period to obtain the Consents identified in Part 2.10 of the Seller Disclosure Schedule (including the Consents identified on **Schedule 5**).

4.4 Conditions. Each of Seller and Subsidiary will use commercially reasonable efforts (i) to cause the conditions set forth in Section 6 to be satisfied on a timely basis and (ii) otherwise to cause the Closing to take place as soon as reasonably practicable. Purchaser will use commercially reasonable efforts (a) to cause the conditions set forth in Section 7 to be satisfied on a timely basis and (b) otherwise to cause the Closing to take place as soon as reasonably practicable.

5. OTHER COVENANTS

5.1 Consents; Releases. Purchaser will cooperate with Seller and Subsidiary, and will provide Seller and Subsidiary with such assistance as Seller or Subsidiary may reasonably request, for the purpose of (i) attempting to obtain the Consents identified in Part 2.10 of the Seller Disclosure Schedule and (ii) arranging for Seller and/or Subsidiary to be released and discharged from its obligations and other liabilities under the Contracts.

5.2 Employment Matters. Prior to the Closing, on a date mutually agreed by the Parties, Purchaser will extend to each Specified Employee an individualized written offer of employment that, if accepted, would contemplate that such Specified Employee would commence his or her employment with Purchaser on the day after the Closing Date and would

provide such Specified Employee with compensation, benefits and terms of employment (including terms relating to job responsibilities) that in the aggregate are the same or similar to such Specified Employee as the compensation, benefits and terms of employment provided by Seller to such Specified Employee immediately prior to the Closing. The individualized written offers of employment shall include provisions that provide that, from and after the time when the applicable Specified Employee begins his or her employment with Purchaser, Seller shall no longer be liable for any compensation or benefits to such Specified Employee (other than compensation and benefits (including severance payments, if applicable) that have accrued and vested prior to such time). On the day after the Closing Date, Purchaser will hire each Specified Employee who accepts the written offer of employment extended to such Specified Employee by Purchaser (it being understood that, except as otherwise provided in any individual employment agreement or other agreement between Purchaser and a Specified Employee, Purchaser will not be obligated to maintain the employment of or the compensation or employee benefits provided to such Specified Employee for any specified period thereafter).

5.3 Use of Names and Trademarks. Following the Closing Date, all Purchaser advertising and promotional materials for the Products shall identify Purchaser as the marketer of the Products and all Product labeling and packaging shall reflect Purchaser as the marketer of the Product; *provided*, *however*, with respect to the finished product inventories purchased by Purchaser hereunder, Purchaser shall, for a period of three (3) months following the Closing, be permitted to sell Product from such inventory as labeled and packaged prior to the Closing Date, without regard to whether such Product references Seller or Subsidiary. Upon the expiration of such transitional period, all Product sold by Purchaser, including such inventory, shall, at Purchaser's sole cost, be required to have labeling and packaging which properly identifies Purchaser as the marketer of the Product and shall not contain any references to Seller or Subsidiary.

5.4 Promotion at ACR Meeting. Purchaser will use commercially reasonable efforts to present and promote the CB-CAPS Diagnostic Assay at the American College of Rheumatology Scientific Meeting in November 2010.

5.5 Receipt of Monies or Other Assets. If any monies or other assets are received by Seller or Subsidiary, on one hand, or Purchaser, on the other hand, after Closing to which the other Party is entitled in accordance with the terms of this Agreement, such Party shall promptly forward such monies or other assets to the other Party within fifteen (15) days of receipt, along with reasonable details regarding such monies or assets to permit their identification as monies or assets to which one or the other Party is entitled.

5.6 Payment of Rents, Utilities, Vendor Accounts and Other Operating Expenses.

(a) Subject to potential reimbursement to the extent provided in Section 5.6(b) below with respect to Transition Operating Costs, Seller will be responsible for and pay when due all rents and utility and other Vendor Accounts and costs associated with the Facility and the Diagnostic Business through the Closing Date. Subject to potential reimbursement to the extent provided in Section 5.6(b) with respect to Transition Operating Costs, utility or other Vendor Account bills and rent prepaid by Seller prior to the Closing which cover services to be provided

to Purchaser after the Closing will be proportionately allocated (except that any security deposit that is required to be maintained for the duration of the lease for the Facility shall be allocated solely to Purchaser) between Seller and Purchaser for the period covered, and Purchaser will reimburse Seller at Closing for any such amount paid by Seller that is allocated to Purchaser (the "***Prorated Amount***"). Utility and other Vendor Account bills and rent paid by Purchaser after the Closing which cover services provided to Seller prior to the Closing Date (other than Transition Operating Costs) shall also be proportionately allocated between Seller and the Purchaser for the period covered, and, upon Purchaser's request, Seller will promptly reimburse Purchaser for any such amount paid by Purchaser that is allocated to Seller. Purchaser shall arrange with each vendor of any Vendor Account to open a new account in its name promptly following the Closing or will replace or discontinue such service but Seller shall not remain a party to any Vendor Account following the Closing.

(b) In addition to, and without duplication of, the Prorated Amount above, at the Closing Purchaser will reimburse Seller for (i) the costs and expenses of certain products and services relating to the Diagnostic Business which Purchaser has approved in writing, including, without limitation, those costs and expenses set forth in **Schedule 5.6(b)** (which shall be modified by the Parties prior to the Closing to the extent necessary to reflect any such costs and expenses so approved between the date of this Agreement and Closing), which have already received Purchaser's written approval and any others that receive Purchaser's written approval between the date of this Agreement and Closing, and (ii) the costs of operating the Diagnostic Business in the ordinary course following October 5, 2010 which costs shall include, without limitation, overhead, regular compensation and benefits of the employees of Seller based at the Facility, laboratory supplies, outside laboratory costs, and shipping and distribution costs and be identified, if applicable, by Seller to Purchaser by written notice provided by Seller to Purchaser prior to the Closing (such costs in clauses (i) and (ii), the "***Transition Operating Costs***"). To the extent the amount of any Prorated Amount or Transition Operating Costs are not identifiable at Closing, Purchaser shall, promptly following the identification of such costs in a written notice from Seller to Purchaser (but in no event later than five (5) business days following delivery of such notice), reimburse Seller for such costs. The Parties recognize and agree that a portion of the Prorated Amount and Transition Operating Costs identifiable at Closing may be based upon estimates and further agree that, to the extent such amounts are based upon estimates, promptly following the determination of the final amounts, Seller shall notify Purchaser of the differences in such amounts and the Parties shall reconcile the amounts paid or to be paid with respect thereto, with Seller reimbursing Purchaser for any previous overpayment and Purchaser reimbursing Seller for any previous underpayment.

5.7 Federal Express Account. On or within one business day following the Closing Date, Seller and Purchaser shall ensure that the Federal Express account associated with the Diagnostic Business is transferred to Purchaser, and Purchaser shall cooperate with Seller on a timely basis to the extent necessary to enable such transfer. All charges to such account occurring after October 5, 2010 shall be Purchaser's liability and Purchaser shall, within five (5) business days of notification by Seller, reimburse Seller for such charges to the extent they are invoiced to Seller.

5.8 Procedures Relating to Accounts Receivable; Payment of Royalties. In addition to the other provisions of this Agreement, the Parties shall abide by the procedures set

forth in **Schedule 5.8** relating to the collection, reconciliation and payment of accounts receivable relating to the Diagnostic Business. Purchaser shall timely pay, when due, all royalties associated with the Acquired Xifin Accounts Receivable and Post-10/5 Accounts Receivable. Seller shall timely pay, when due, all royalties associated with the accounts receivable of the Diagnostic Business with a date of service prior to January 12, 2010 (as defined by the blood sample draw date).

5.9 Security Interest in Intellectual Property Collateral.

(a) Effective as of the Closing Date, Purchaser does hereby grant to Seller a continuing security interest of first priority in, all of Purchaser's right, title and interest in, to and under the Intellectual Property Collateral, whether now or hereafter existing, as security for the prompt and complete payment and performance of Purchaser's obligation under Sections 1.3(c) (including to the extent such payment obligation is accelerated pursuant to Section 1.9(a)) of this Agreement, and, to the extent payment of such obligation is not made when due, interest payable on such payment owed pursuant to Section 1.11 of this Agreement. In furtherance of the foregoing:

(i) On a continuing basis, Purchaser will, upon request by Seller, make, execute, acknowledge and deliver, and file and record in the proper filing and recording places in the United States, all such instruments, including appropriate financing and continuation statements and collateral agreements and filings with the United States Patent and Trademark Office, and take all such action as may reasonably be deemed necessary or advisable, or as requested by Seller, to perfect Seller's security interest in the Intellectual Property Collateral, and otherwise to carry out the intent and purposes of the Intellectual Property Security Agreement, or for assuring and confirming to Seller the grant and perfection of a security interest in all Intellectual Property Collateral; and

(ii) Purchaser hereby irrevocably appoints Seller as Purchaser's attorney-in- fact, with full authority in the place and stead of Purchaser and in the name of Purchaser, Seller or otherwise, from time to time in Seller's discretion, upon Purchaser's failure or inability to do so, to take any action and to execute any instrument which Seller may deem necessary or advisable to file, in its sole discretion, one or more financing or continuation statements and amendments thereto, or other notice filings or notations in appropriate filing offices, relative to any of the Intellectual Property Collateral, with prior notice to Purchaser, with all appropriate jurisdictions, as Seller deems appropriate, in order to further perfect or protect Seller's interest in the Intellectual Property Collateral.

(b) This Agreement shall constitute a security agreement for purposes of the UCC in all relevant jurisdictions. In furtherance of the foregoing, Purchaser hereby authorizes Seller to file one or more financing statements (or similar documents) in all relevant jurisdictions with respect to the Intellectual Property Collateral to evidence the granting of the security interest described in this Section 5.9. For greater certainty, Seller shall not file this Agreement in connection with the filing of any such financing statements (or similar documents).

(c) The security interests granted pursuant to this Section 5.9 shall remain in full force and effect and continue to be effective should any petition be filed by or against Purchaser

for liquidation or reorganization, should Purchaser become insolvent or make an assignment for the benefit of creditors or should a receiver or trustee be appointed for all or any significant part of Purchaser's property and assets, and shall continue to be effective or be reinstated, as the case may be, if at any time payment and performance of the obligations secured thereby, or any part thereof, are, pursuant to applicable law, rescinded or reduced in amount, or must otherwise be restored or returned by Seller, whether as a "***voidable preference,***" "***fraudulent conveyance,***" or otherwise, all as though such payment or performance had not been made. In the event that any payment, or any part thereof, is rescinded, reduced, restored or returned, such obligations shall be reinstated and deemed reduced only by such amount paid and not so rescinded, reduced, restored or returned.

5.10 Negative Covenants. Until the termination of the security interest in favor of Seller in the Intellectual Property Collateral under the Intellectual Property Security Agreement (a) Purchaser shall not sell, lease, license, transfer or otherwise dispose of any of the Intellectual Property Collateral, or attempt or contract to do so, other than the granting of non-exclusive licenses; and (b) Purchaser shall not, directly or indirectly, create, permit or suffer to exist, and shall defend the Intellectual Property Collateral against and take such other action as is necessary to remove, any lien on the Intellectual Property Collateral, except the lien granted to Seller under the Intellectual Property Security Agreement, the lien of the Junior Lienholder and any other liens granted by Purchaser after the Closing Date and approved in writing prior to such grant by, and pursuant to documentation satisfactory to, Seller.

5.11 Intellectual Property Assignments. Following the Closing Date, Seller shall execute such intellectual property assignments on terms mutually satisfactory to the Parties and consistent with this Agreement as may be reasonably requested by Purchaser for the purpose of enabling Purchaser to make the necessary filings with the United States Patent and Trademark Office to transfer the Patents and Trademarks to Purchaser.

6. CONDITIONS PRECEDENT TO PURCHASER'S OBLIGATION TO CLOSE.

Purchaser's obligation to purchase the Assets and to take the other actions required to be taken by Purchaser at the Closing is subject to the satisfaction, at or prior to the Closing, of each of the following conditions (any of which may be waived by Purchaser, in whole or in part, in writing):

6.1 Accuracy of Representations. All representations and warranties of Seller and Subsidiary set forth in Section 2 shall be true and correct at and as of the date of this Agreement and at and as of the Closing Date; *provided*, *however*, that, for purposes of this Section 6.1, any inaccuracies in the representations and warranties of Seller and Subsidiary will be disregarded unless all such inaccuracies, considered collectively, have a material adverse effect on the value of the Diagnostic Business and Assets taken as a whole.

6.2 Performance of Covenants. Each of Seller and Subsidiary shall have performed, in all material respects, all covenants required by this Agreement to be performed by Seller or Subsidiary on or before the Closing Date.

6.3 Additional Documents. Each of the following additional documents shall have been delivered to Purchaser:

(a) a certificate, executed by an executive officer of Seller, confirming that, to the actual knowledge of such executive officer, the conditions set forth in Sections 6.1 and 6.2 have been satisfied;

(b) such bills of sale, assignments and other instruments including, but not limited to, the Ancillary Agreements to which it is a party, as Seller or Subsidiary may be required to execute in order to evidence and effectuate the transfer of the Assets, including the Contracts, to Purchaser; and

(c) such good standing certificates and other similar documents as Purchaser may reasonably request to ensure that the actions required to be taken by Seller and Subsidiary at the Closing have been properly authorized.

6.4 No Restraints. No injunction or other order preventing the consummation of the transactions contemplated by this Agreement shall have been issued since the date of this Agreement by any United States federal or state court of competent jurisdiction and shall remain in effect; and no United States federal or state Legal Requirement that makes consummation of the transactions contemplated by this Agreement illegal shall have been enacted or adopted since the date of this Agreement and shall remain in effect.

6.5 Consents. The Consents identified on **Schedule 5** shall have been obtained.

7. CONDITIONS PRECEDENT TO SELLER'S AND SUBSIDIARY'S OBLIGATION TO CLOSE. Seller's and Subsidiary's obligation to sell and transfer the Assets to Purchaser and to take the other actions required to be taken by Seller or Subsidiary at the Closing is subject to the satisfaction, at or prior to the Closing, of each of the following conditions (any of which may be waived by Seller or Subsidiary, in whole or in part, in writing):

7.1 Accuracy of Representations. All representations and warranties of Purchaser set forth in Section 3 shall be true and correct at and as of the date of this Agreement and at and as of the Closing Date; *provided*, *however*, that, for purposes of this Section 7.1, any inaccuracies in the representations and warranties of Purchaser will be disregarded unless all such inaccuracies, considered collectively, have a material adverse effect on the business, assets (tangible or intangible), liabilities or operations of Purchaser.

7.2 Performance of Covenants. Purchaser shall have performed, in all material respects, all covenants required by this Agreement to be performed by Purchaser on or before the Closing Date.

7.3 Delivery of Consideration. At the Closing, Seller and Subsidiary shall have received the Initial Cash Payment, and Seller shall have received the Prorated Amount and the Transition Operating Costs that are known as of the Closing.

7.4 Additional Documents. The Intellectual Property Security Agreement shall have been executed on behalf of Purchaser, the Subordination Agreement shall have been executed on

behalf of Los Alamos National Bank and the Ancillary Agreements shall have been executed by each party thereto and each shall have been delivered to Seller. Purchaser shall have delivered to Landlord Purchaser's fully executed counterparts to the Lease Assumption and the Consent to Assignment and an insurance certificate in the form required by the Lease (as defined in the Consent to Assignment). In addition, each of the following additional documents shall have been delivered to Seller:

(a) a certificate, executed by an executive officer of Purchaser, confirming that, to the actual knowledge of such executive officer, the conditions set forth in Sections 7.1 and 7.2 have been satisfied; and

(b) such good standing certificates and other similar documents as Seller may reasonably request to ensure that the actions required to be taken by Purchaser at the Closing have been properly authorized.

7.5 No Restraints. No injunction or other order preventing the consummation of the transactions contemplated by this Agreement shall have been issued since the date of this Agreement by any United States federal or state court of competent jurisdiction and shall remain in effect; and no United States federal or state Legal Requirement that makes consummation of the transactions contemplated by this Agreement illegal shall have been enacted or adopted since the date of this Agreement and shall remain in effect.

7.6 Consents. The Consents identified on **Schedule 5** shall have been obtained.

7.7 Senior Lienholder. Purchaser shall have obtained all necessary consents or taken such other steps as are necessary or advisable to ensure that Seller's lien on the Intellectual Property Collateral and established pursuant to the Intellectual Property Security Agreement will be the senior lien or encumbrance on the Intellectual Property Collateral.

8. TERMINATION.

8.1 Right to Terminate Agreement. This Agreement may be terminated prior to the Closing:

(a) by the mutual written consent of the Parties;

(b) by any Party (by delivery of a written termination notification in accordance with Section 8.2) at any time after October 31, 2010, if the Closing has not taken place on or before October 31, 2010, unless the failure of the Closing to take place on or before such date is attributable to a breach by such Party of any of its obligations set forth in this Agreement;

(c) by Seller (by delivery of a written termination notification in accordance with Section 8.2) if (i) there shall have been a breach on the part of Purchaser of any of its representations, warranties or covenants such that the condition set forth in Section 7.1 or Section 7.2, as the case may be, would not be satisfied as of the time of such breach, (ii) Seller shall have given written notice of such breach to Purchaser, (iii) at least twenty days shall have elapsed since the delivery of such written notice to Purchaser, (iv) such breach shall not have

been cured and (v) Purchaser shall not be using its commercially reasonable efforts to attempt to cure such breach; or

(d) by Purchaser (by delivery of a written termination notification in accordance with Section 8.2) if (i) there shall have been a breach on the part of Seller or Subsidiary of any of its representations, warranties or covenants such that the condition set forth in Section 6.1 or Section 6.2, as the case may be, would not be satisfied as of the time of such breach, (ii) Purchaser shall have given written notice of such breach to Seller, (iii) at least twenty days shall have elapsed since the delivery of such written notice to Seller, (iv) such breach shall not have been cured and (v) Seller shall not be using its commercially reasonable efforts to attempt to cure such breach.

8.2 Termination Procedures. If any Party wishes to terminate this Agreement pursuant to Section 8.1, such Party will deliver to the other Parties a written termination notification stating that such Party is terminating this Agreement and setting forth a brief statement of the basis on which such Party is terminating this Agreement.

8.3 Effect of Termination. Upon the termination of this Agreement pursuant to Section 8.1, no Party will have any obligation or other liability to any other Party, except that (i) the Parties will remain bound by the provisions of Section 10 and by the provisions of the Confidentiality Agreement, and (ii) no Party will be relieved of any liability for any breach of this Agreement.

9. INDEMNIFICATION.

9.1 Survival of Seller and Subsidiary Representations; Indemnification by Seller.

(a) All of the representations and warranties of Seller and Subsidiary set forth in this Agreement and in any certificate delivered pursuant to this Agreement, and all covenants of Seller and Subsidiary set forth in Section 4, will survive the Closing but will terminate and expire, and will cease to be of any force or effect, at 10:00 a.m. (California time) on the twelve month anniversary of the Closing Date (the "***Expiration Date***"), and all liability of Seller and Subsidiary with respect to such representations, warranties and covenants (and any liability with respect to the certificate delivered to Purchaser pursuant to Section 6.3(a)) will thereupon be extinguished; *provided, however*, that if, prior to the Expiration Date, Purchaser shall have duly delivered to Seller, in conformity with all of the applicable procedures set forth in Section 9.1(d), an Indemnification Demand, then the specific claim set forth in such Indemnification Demand will survive (and will not be extinguished upon) the Expiration Date and will continue to survive until such claim is resolved in accordance with Section 9.3.

(b) Subject to the limitations set forth in this Section 9.1 and elsewhere in this Agreement, from and after the Closing Date, Seller will indemnify Purchaser against any Damages that Purchaser incurs as a result of (i) any breach by Seller or Subsidiary of any of Seller's or Subsidiary's representations, warranties or covenants hereunder or in any certificate delivered by Seller or Subsidiary pursuant to this Agreement or (ii) any and all liabilities attributable to Seller's or Subsidiary's ownership of the Assets or operation of the Diagnostic

Business before the Closing Date (except for any Assumed Liabilities). Seller's obligation to indemnify Purchaser pursuant to this Section 9.1(b) will not relieve Seller or Subsidiary of, or alter in any way, Seller's or Subsidiary's obligation to fully satisfy all of Seller's and Subsidiary's liabilities other than the Assumed Liabilities.

(c) Except in the case of fraud or intentional misrepresentation, the total amount of the payments that Seller can be required to make under or in connection with Section 9.1(b)(i) of this Agreement will be limited in the aggregate to $[***], and Seller's cumulative liability will in no event exceed such amount. Notwithstanding anything else in this Agreement, except in the case of fraud or intentional misrepresentation, the indemnification remedies provided in this Section 9.1 shall be deemed to be the sole and exclusive remedy of Purchaser with respect to any and all claims (under any theory of liability, including but not limited to contract claims and tort claims) relating to the subject matter of this Agreement. Furthermore, notwithstanding anything to the contrary herein, the limitations set forth in this Section 9.1(c) shall not apply to the obligations set forth in Sections 1.4, 1.11, 5.5, 5.6 or 5.8 of this Agreement.

(d) If Purchaser wishes to assert an indemnification claim against Seller, Purchaser will deliver to Seller, as soon as reasonably practicable, an Indemnification Demand pursuant to Section 9.3. Notwithstanding anything to the contrary contained in this Agreement, Purchaser will not be permitted to deliver any Indemnification Demand to Seller (and will not be entitled to assert any claim set forth in any Indemnification Demand) unless Purchaser has reasonably determined that the breach alleged in such Indemnification Demand has actually occurred.

(e) If Purchaser receives notice or otherwise obtains knowledge of any Matter or any threatened Matter that may reasonably be expected to give rise to an indemnification claim against Seller, then Purchaser will deliver to Seller a written notice describing such Matter in reasonable detail as soon as reasonably practicable. Seller will have the right, at its election and at its sole expense, to assume the defense of any such Matter with its own counsel. If Seller elects to assume the defense of any such Matter, then:

(i) notwithstanding anything to the contrary contained in this Agreement, Seller will not be required to pay or otherwise indemnify Purchaser against any attorneys' fees or other expenses incurred on behalf of Purchaser in connection with such Matter following Seller's election to assume the defense of such Matter;

(ii) Purchaser will make available to Seller all books, records and other documents and materials that are under the control of Purchaser or any of Purchaser's Affiliates, advisors or representatives and that Seller reasonably considers necessary or desirable for the defense of such Matter;

(iii) Purchaser will execute such documents and take such other actions as Seller may reasonably request for the purpose of facilitating the defense of, or any settlement, compromise or adjustment relating to, such Matter;

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(iv) Purchaser will otherwise fully cooperate as reasonably requested by Seller in the defense of such Matter; and

(v) Purchaser will not admit any liability with respect to such Matter;

(vi) Seller will not settle, adjust or compromise such Matter without the consent of Purchaser unless (A) there is no finding or admission of any violation of any Legal Requirement by Purchaser, and (B) the sole relief provided is monetary damages that are paid in full by Seller.

If Seller elects not to assume the defense of such Matter, then Purchaser will proceed diligently to defend such Matter with the assistance of counsel reasonably satisfactory to Seller; *provided, however*, that Purchaser will not settle, adjust or compromise such Matter without the consent of Seller unless (A) there is no finding or admission of any violation of any Legal Requirement by Seller, and (B) the sole relief provided is monetary damages that are paid in full by Purchaser.

(f) To the extent Seller makes or is required to make any indemnification payment to Purchaser, Seller will be entitled to exercise, and will be subrogated to, any rights and remedies (including rights of indemnity, rights of contribution and other rights of recovery) that Purchaser or any of Purchaser's Affiliates may have against any other Person with respect to any Damages, circumstances or Matter to which such indemnification payment is directly or indirectly related. Purchaser will take such actions as Seller may reasonably request for the purpose of enabling Seller to perfect or exercise Seller's right of subrogation hereunder.

9.2 Survival of Purchaser Representations; Indemnification by Purchaser.

(a) All of the representations and warranties of Purchaser set forth in this Agreement and in any certificate delivered pursuant to this Agreement will survive the Closing but will terminate and expire, and will cease to be of any force or effect, on the Expiration Date, and all liability of Purchaser with respect to such representations and warranties (and any liability with respect to the certificate delivered to Seller pursuant to Section 7.4(a)) will thereupon be extinguished; *provided, however*, that if, prior to the Expiration Date, Seller shall have delivered to Purchaser, in conformity with all of the applicable procedures set forth in Section 9.2(d), an Indemnification Demand, then the specific claim set forth in such Indemnification Demand will survive (and will not be extinguished upon) the Expiration Date and will continue to survive until such claim is resolved in accordance with Section 9.3.

(b) Subject to the limitations set forth in this Section 9.2 and elsewhere in this Agreement, from and after the Closing Date, Purchaser will indemnify Seller and Subsidiary against any Damages that Seller or Subsidiary incurs as a result of (i) any breach by Purchaser of any of Purchaser's representations, warranties or covenants hereunder or in any certificate delivered by Purchaser pursuant to this Agreement or (ii) any and all Assumed Liabilities and any and all liabilities attributable to Purchaser's ownership of the Assets and operation of the Diagnostic Business on or after the Closing Date. The Purchaser's obligation to indemnify Seller and Subsidiary pursuant to this Section 9.2 will not relieve Purchaser of, or alter in any way, Purchaser's obligation to fully satisfy all of the Assumed Liabilities.

(c) Except in the case of fraud or intentional misrepresentation, the total amount of the payments that Purchaser can be required to make under or in connection with Section 9.2(b)(i) of this Agreement will be limited in the aggregate to $[***], and Purchaser's cumulative liability will in no event exceed such amount. Notwithstanding anything else in this agreement, except in the case of fraud or intentional misrepresentation, the indemnification remedies provided in this Section 9.2 shall be deemed to be the sole and exclusive remedy of Seller and Subsidiary with respect to any and all claims (under any theory of liability, including but not limited to contract claims and tort claims) relating to the subject matter of this Agreement. Furthermore, notwithstanding anything to the contrary herein, the limitations set forth in this Section 9.2(c) shall not apply to the obligations set forth in Sections 1.3, 1.4, 1.7, 1.11, 5.5, 5.6, 5.7, 5.8, or 5.9 of this Agreement.

(d) If Seller wishes to assert an indemnification claim against Purchaser, Seller will deliver to Purchaser, as soon as reasonably practicable, an Indemnification Demand pursuant to Section 9.3. Notwithstanding anything to the contrary contained in this Agreement, Seller will not be permitted to deliver any Indemnification Demand to Purchaser (and will not be entitled to assert any claim set forth in any Indemnification Demand) unless Seller has reasonably determined that the breach alleged in such Indemnification Demand has actually occurred.

9.3 Indemnification Procedure.

(a) In order for any Indemnified Person to seek indemnification under Section 9.1 or Section 9.2, as applicable, such Indemnified Person shall deliver, in good faith, a written demand (an "***Indemnification Demand***") to the Indemnifying Person which:

(i) states that the Indemnified Person has incurred or reasonably anticipates that it will have to incur Damages that are subject to indemnification under this Agreement;

(ii) a reasonably detailed description of the facts and circumstances giving rise to the indemnification claim, copies of any applicable complaints or demands, and the nature of the breach of representation, warranty, contractual provision or covenant to which such item is related;

(iii) a reasonably detailed description of, and a good faith estimate of the total amount of, the Damages actually incurred or expected to be incurred by the Indemnified Person and subject to indemnification hereunder (the "***Asserted Damages Amount***"); and

(iv) a demand for payment in the amount of such Damages.

(b) Within 20 days after delivery of an Indemnification Demand, the Indemnifying Person shall deliver to the Indemnified Person a written response (the "***Response***") in which the Indemnifying Person shall: (i) agree that the Indemnified Person is entitled to receive all of the Asserted Damages Amount (the "***Agreed Portion***"); (ii) agree that the Indemnified Person is entitled to receive part, but not all, of the Asserted Damages Amount (such portion, also the "***Agreed Portion***"); or (iii) dispute that the Indemnified Person is entitled to receive any of the Asserted Damages Amount.

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(c) In the event that the Indemnifying Person shall (i) dispute that the Indemnified Person is entitled to receive any of the Asserted Damages Amount, or (ii) agrees that the Indemnified Person is entitled to only the Agreed Portion of the Asserted Damages Amount, the Indemnified Person and the Indemnifying Person shall attempt in good faith to agree upon the rights of the respective parties with respect to each of the indemnification claims that comprise the Asserted Damages Amount (or the portion of the Asserted Damages Amount not comprising the Agreed Portion). If the Indemnified Person and the Indemnifying Person should so agree, a memorandum setting forth such agreement shall be prepared and signed by both such parties. If no such agreement can be reached after good faith negotiation within 60 days after delivery of a Response, either the Indemnified Person or the Indemnifying Person may demand arbitration of any matter set forth in the applicable Indemnification Demand.

(d) If no agreement is reached, the matter shall be settled by arbitration conducted by one arbitrator mutually agreeable to the Indemnified Person and the Indemnifying Person. In the event that, within thirty days after submission of any dispute to arbitration, the Indemnified Person and the Indemnifying Person cannot mutually agree on one arbitrator, then the parties shall arrange for the American Arbitration Association to designate a single arbitrator in accordance with the rules of the American Arbitration Association. Any such arbitration shall be held in San Diego County, California, under the rules and procedures then in effect of the American Arbitration Association. The arbitrator shall determine how all expenses relating to the arbitration shall be paid, including the respective expenses of each party, the fees of the arbitrator and the administrative fee of the American Arbitration Association. The arbitrator shall set a limited time period and establish procedures designed to reduce the cost and time for discovery while allowing the Indemnified Person and the Indemnifying Person an opportunity, adequate in the sole judgment of the arbitrator to discover relevant information from the opposing parties about the subject matter of the dispute. The arbitrator shall rule upon motions to compel or limit discovery and shall have the authority to impose sanctions, including attorneys' fees and costs, to the same extent as a competent court of law or equity, should the arbitrator determine that discovery was sought without substantial justification or that discovery was refused or objected to without substantial justification. The decision of the arbitrator as to the validity and amount of any indemnification claim in such Indemnification Demand shall be subject to the limitations set forth in this Agreement and final, binding and conclusive upon the parties. Such decision shall be written and shall be supported by written findings of fact and conclusions which shall set forth the award, judgment, decree or order awarded by the arbitrator. All payments required by the arbitrator shall be made within thirty days after the decision of the arbitrator is rendered. Judgment upon any award rendered by the arbitrator may be entered in any court having jurisdiction.

10. MISCELLANEOUS.

10.1 Time of Essence. Time is of the essence with respect to this Agreement.

10.2 No Other Representations. The Parties acknowledge that, except as expressly set forth in this Agreement, neither Party has made or is making any representations or warranties whatsoever to the other, implied or otherwise.

10.3 Knowledge; Materiality. Neither Party will be deemed to have breached any representation or warranty that is made to such Party's "knowledge" unless an officer of such Party with the rank of Vice President or above has actual knowledge or, solely with respect to Sections 2.4 and 2.5 of this Agreement, Mariko Matsutani or Curtis McGuire has actual knowledge, as of the date of this Agreement, that such representation or warranty is materially inaccurate. Furthermore, for purposes of the representations and warranties set forth in Sections 2.4 and 2.5, unless a breach of the representation or warranty results in a material adverse effect on the Diagnostic Business, Seller shall not be required to indemnify Purchaser for such breach.

10.4 Access of Seller to Books and Records Related to the Diagnostic Business or Assets. At all times after the Closing Date, Purchaser will give Seller and Seller's advisors and representatives reasonable access, during normal business hours and with prior written notice, to all books and records of Seller that are reasonably requested and included in the Assets or relate to the Diagnostic Business (but only to the extent such books and records relate to any period prior to the Closing Date).

10.5 Governing Law. This Agreement will be construed in accordance with, and governed in all respects by, the laws of the State of California (without giving effect to principles of conflicts of law).

10.6 Venue and Jurisdiction. If any legal proceeding or other legal action relating to this Agreement is brought or otherwise initiated, the venue therefor will be in the County of San Diego in the State of California, which will be deemed to be a convenient forum. The Parties hereby expressly and irrevocably consent and submit to the jurisdiction of the state and federal courts in the County of San Diego in the State of California.

10.7 Notices. Any notice or other communication required or permitted to be delivered to either Party under this Agreement must be in writing and will be deemed properly delivered, given and received when delivered (by hand, by registered mail, by courier or express delivery service or by facsimile) to the address or facsimile telephone number set forth beneath the name of such Party below (or to such other address or facsimile telephone number as such Party shall have specified in a written notice given to the other Party):

if to Purchaser:

Exagen Diagnostics, Inc.
Science & Technology Park
801 University Blvd. SE, Suite 103
Albuquerque, NM 87106
Attention: President
Facsimile: (505) 727-7965

if to Seller or Subsidiary:

Cypress Bioscience, Inc.
4350 Executive Drive, Suite 325
San Diego, CA 92121
Attention: Ciara Kennedy, VP Operations
Facsimile: (858) 452-1222

with a copy to:

Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121-1909
Attention: Matthew T. Browne
Facsimile: (858) 550-6045

10.8 Public Announcements. Except for the press release attached hereto as **Exhibit G** and Seller's Form 8-K (the "***Form 8-K***") disclosing this Agreement and the transactions contemplated hereby, each of which shall be released promptly following the execution of this Agreement, and any subsequent filings by Seller with the Securities and Exchange Commission (the "***Subsequent Filings***") that disclose this Agreement (including by filing this Agreement) and the transactions contemplated hereby, or as may be required by any Legal Requirement, neither Party will (and neither Party will permit any of its advisors or representatives to) issue any press release or make any public statement regarding this Agreement or any of the transactions contemplated by this Agreement, without the other Party's prior written consent (which will not be unreasonably withheld), except that Seller and Purchaser may make public statements regarding this Agreement or any of the transactions contemplated by this Agreement that are consistent with the press release attached hereto as **Exhibit G**, the 8-K or any Subsequent Filings.

10.9 Assignment. Neither Party may assign any of its rights or delegate any of its obligations under this Agreement to any other Person without the prior written consent of the other Party (which consent shall not be unreasonably withheld or delayed); *provided*, *however*, that Seller and Subsidiary, without Purchaser's prior consent, may assign to any Person its right to receive all or any portion of any of the cash payments to be made by Purchaser pursuant to Section 1.3.

10.10 Parties in Interest. Nothing in this Agreement is intended to provide any rights or remedies to any employee of Seller or to any other Person other than the Parties or any Indemnified Person.

10.11 Severability. In the event that any provision of this Agreement, or the application of such provision to any Person or set of circumstances, shall be determined to be invalid, unlawful, void or unenforceable to any extent, the remainder of this Agreement, and the application of such provision to Persons or circumstances other than those as to which it is determined to be invalid, unlawful, void or unenforceable, will not be affected and will continue to be valid and enforceable to the fullest extent permitted by law.

10.12 Entire Agreement. This Agreement, the Intellectual Property Security Agreement and the Confidentiality Agreement (which remains in full force and effect) set forth the entire understanding of the Parties and supersede all other agreements and understandings between the Parties relating to the subject matter hereof and thereof.

10.13 Waiver. No failure on the part of either Party to exercise any power, right, privilege or remedy under this Agreement, and no delay on the part of either Party in exercising any power, right, privilege or remedy under this Agreement, will operate as a waiver thereof; and no single or partial exercise of any such power, right, privilege or remedy will preclude any other or further exercise thereof or of any other power, right, privilege or remedy. Any waiver of any power, right, privilege or remedy under this Agreement must be by means of a written instrument.

10.14 Amendments. This Agreement may not be amended, modified, altered or supplemented except by means of a written instrument executed on behalf of both Parties.

10.15 Counterparts. This Agreement may be executed in several counterparts, each of which will constitute an original and all of which, when taken together, will constitute one agreement.

10.16 Interpretation of Agreement.

(a) Each Party acknowledges that it has participated in the drafting of this Agreement, and any applicable rule of construction to the effect that ambiguities are to be resolved against the drafting party will not be applied in connection with the construction or interpretation of this Agreement.

(b) Whenever required by the context hereof, the singular number will include the plural, and vice versa; the masculine gender will include the feminine and neuter genders; and the neuter gender will include the masculine and feminine genders.

(c) As used in this Agreement, the words “include” and “including,” and variations thereof, will not be deemed to be terms of limitation, and will be deemed to be followed by the words “without limitation.”

(d) Unless the context otherwise requires, references in this Agreement to “Sections,” “Schedules” and “Exhibits” are intended to refer to Sections of and Schedules and Exhibits to this Agreement.

(e) The table of contents of this Agreement and the bold-faced headings contained in this Agreement are for convenience of reference only, will not be deemed to be a part of this Agreement and will not be referred to in connection with the construction or interpretation of this Agreement.

10.17 No Setoff. The Parties agree that any payments required to be made by any Party pursuant to this Agreement shall be made without any withholding, deduction or set-off, and each Party hereto agrees not to assert a right of set-off with respect to any such payments at common law or otherwise; *provided*, *however*, a Party may set-off (a) any Agreed Portion, (b)

any amount that is subject to a memorandum setting forth an agreement under Section 9.3(c) or (c) any amount that is subject to a final judgment, decree or order awarded by an arbitrator in connection with the resolution of an Indemnification Demand.

10.18 Further Assurances. Each of the Parties hereto shall execute and deliver such additional documents, certificates and instruments, and perform such additional acts, as may be reasonably requested and necessary or appropriate to carry out the purposes and intent and all of the provisions of this Agreement and the Ancillary Agreements and to consummate all of the transactions contemplated by this Agreement and the Ancillary Agreements.

[Remainder of Page Intentionally Left Blank]

The Parties have caused this Asset Purchase Agreement to be executed as of the date first written above.

CYPRESS BIOSCIENCE, INC.

By: /s/ Jay D. Kranzler
Name: Jay D. Kranzler
Title: Chairman and Chief Executive Officer

PROPRIUS, INC.

By: /s/ Sabrina Martucci Johnson
Name: Sabrina Martucci Johnson
Title: President

EXAGEN DIAGNOSTICS, INC.

By: /s/ Scott L. Glenn
Name: Scott L. Glenn
Title: Chairman and Chief Executive Officer

EXHIBIT A

CERTAIN DEFINITIONS

For purposes of the Agreement:

"**Accounts Reporting Period**" has the meaning set forth in Section 1.8(e) of the Agreement.

"**Acquired Xifin Accounts Receivable**" means all Xifin accounts receivable outstanding at the close of business on October 5, 2010 for testing services performed by Seller or Subsidiary, as applicable, with a date of service of January 12, 2010 or later (as defined by the blood sample draw date).

"**Acquired Xifin Accounts Term**" means the period of time beginning on the Closing Date and continuing so long as any Acquired Xifin Account Receivable remains outstanding.

"**Affiliate**" means, with respect to any Person, any other Person directly or indirectly controlling, controlled by or under common control with such Person.

"**Agreed Portion**" has the meaning set forth in Section 9.3(b) of the Agreement.

"**Agreement**" means the Asset Purchase Agreement to which this Exhibit A is attached, and its attachments and schedules.

"**Allocation**" has the meaning set forth in Section 1.4(a) of the Agreement.

"**Ancillary Agreements**" has the meaning set forth in Section 1.5(b) of the Agreement.

"**Asserted Damages Amount**" has the meaning set forth in Section 9.3(a) of the Agreement.

"**Assets**" has the meaning set forth in Section 1.1 of the Agreement.

"**Assumed Liabilities**" means (i) all obligations, controversies, claims, demands, debts and other liabilities under or relating to the Contracts and incurred after the Closing or arising from Purchaser's performance under the Contracts after the Closing, (ii) all obligations to make payments of license royalties due on the collection of the Acquired Xifin Accounts Receivable and the Post-10/5 Accounts Receivable, (iii) all Transition Operating Costs and any Prorated Amount, and (iv) the Federal Express charges described in Section 5.7 of the Agreement.

"**August Financial Information**" has the meaning set forth in Section 2.11(b) of the Agreement.

"**Avise MCV Product**" means a specialized lab test based, in whole or in part, on any Orgentec Technology that measures antibodies to mutated citrullinated vimentin.

"**Avise PG Product**" means a specialized test based, in whole or in party, on any intellectual property included in the Assets that measures methotrexate polyglutamate (MTXPG), an indicator of how well the body metabolizes methotrexate.

"**CB-CAPS Annual Sales Milestone**" means [***] measured over a calendar year is in excess of [***].

"**CB-CAPS Diagnostic Assay**" means a product that uses any CB-CAPS Technology and has the claims to diagnose lupus.

"**CB-CAPS Monitoring Assay**" means a product that uses any CB-CAPS Technology and has the claims to monitor lupus.

"**CB-CAPS Monitoring Assay [***] Milestone**" means [***].

"**CB-CAPS Product**" means a product that uses any CB-CAPS Technology.

"**CB-CAPS Technology**" means any technology based, in whole or in part, on any intellectual property licensed pursuant to that certain Exclusive License Agreement by and between the University of Pittsburgh – of the Commonwealth System of Higher Education and Stagemark, Inc. (and its successors and assigns) dated as of October 11, 2005, and as subsequently amended.

"**Cellatope Agreement**" means that certain Asset Purchase Agreement by and between Seller and Cellatope Corporation, dated February 9, 2009.

"**Change of Control**" means (a) in the case of Purchaser, more than 50% of the Assets are exclusively licensed, sold, transferred or otherwise disposed of (including by way of merger, consolidation or reorganization) to any Person which is not a direct or indirect wholly-owned subsidiary of Purchaser, (b) a sale, exclusive license or other disposition of all or substantially all of the assets of Purchaser on a consolidated basis (other than to any wholly-owned subsidiary (direct or indirect) of Purchaser, (c) a merger or consolidation in which Purchaser is not the surviving entity and in which the stockholders of Purchaser immediately prior to such consolidation or merger own less than 50% of the surviving entity's (or its parent's) voting power immediately after the transaction, and (d) a reverse merger in which Purchaser is the surviving entity but the shares of Purchaser's capital stock outstanding immediately preceding the merger are converted by virtue of the merger into other property, whether in the form of securities, cash or otherwise, and in which the stockholders of Purchaser immediately prior to such reverse merger own less than 50% of Purchaser's (or its parent's) voting power immediately after the transaction; provided that a Change of Control shall not include any transaction or transactions, whether or not related, that do not involve any merger, reverse merger or consolidation involving Purchaser and that are consummated for bona fide financing purposes where the consideration received by Purchaser for issuance of its securities is cash.

"**Closing**" has the meaning set forth in Section 1.6 of the Agreement.

"**Closing Date**" has the meaning set forth in Section 1.6 of the Agreement.

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

"**Code**" has the meaning set forth in Section 1.4(a) of the Agreement.

"**Combination Product**" means a system, package, or combination product or service that contains one or more other parts that could be sold separately.

"**Confidentiality Agreement**" means the Confidentiality Agreement between the Parties dated as of December 10, 2009.

"**Consent**" means any consent, approval or waiver.

"**Consent to Assignment**" has the meaning set forth in Section 1.5(b) of the Agreement.

"**Contracts**" means (i) the contracts, purchase orders, sales orders, and other instruments identified on **Schedule 1** and (ii) each other contract, purchase order, sales order or other instrument relating exclusively to any one or more of the Existing Products that is executed, entered into or accepted on behalf of Seller or Subsidiary on or after the date of this Agreement and prior to the Closing in the ordinary course of business or with the approval of Purchaser.

"**Damages**" means out-of-pocket losses and damages, excluding indirect, consequential, incidental, special and punitive damages; *provided, however*, that for purposes of computing the amount of Damages incurred by any Person, there will be deducted an amount equal to the amount of any insurance proceeds, indemnification payments, contribution payments or reimbursements actually received by such Person or any of such Person's Affiliates in connection with such Damages or the circumstances giving rise thereto.

"**December Financial Information**" has the meaning set forth in Section 2.11(a) of the Agreement.

"**Diagnostic Business**" means Seller's and Subsidiary's personalized medicine services business which helps physicians manage and optimize the care of their patients through Seller's testing services that provide physicians with actionable information about their patients.

"**Distributor**" means an independent contractor which has accepted an appointment to sell or otherwise market Products or the CB-CAPS Monitoring Assay for Purchaser or its Affiliates or Licensees within one or more markets within one or more territories under an arrangement in which neither Distributor nor Purchaser has the authority to control the day-to-day activities of the other.

"**Environmental Laws**" means all federal, state or local laws (including any statute, rule, regulation, ordinance, code or rule of common law), and all judicial or administrative interpretations thereof, and all decrees, judgments, policies, written guidance or judicial or administrative orders relating to the environment, health, safety or Hazardous Substances, including the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9901 et seq., the Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901 et seq., the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. § 11001 et seq., the Clean Air Act, 42 U.S.C. § 7401 et seq., the Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seq., the Toxic Substance Control Act, 15 U.S.C. § 2601 et seq., the Safe Drinking Water Act, U.S.C. § 300f et seq., the Occupational Safety and Health Act, 42 U.S.C. § 1801 et

seq., the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. § 136 et seq., the Hazardous Materials Transportation Act, 49 U.S.C. § 1801 et seq., and their state counterparts or equivalents, all as amended, and any regulations or rules adopted or promulgated pursuant thereto.

"**Environmental Permits**" has the meaning set forth in 2.4(d) of the Agreement.

"**Equipment**" means the equipment identified on **Schedule 3**.

"**Existing Products**" means any Avise PG Product, Avise MCV Product or CB-CAPS Product.

"**Expiration Date**" has the meaning set forth in Section 9.1(a) of the Agreement.

"**Facility**" means the premises located at 9393 Towne Centre Drive, Suite 140, San Diego, California 92121, that are being leased to Seller.

"**FDA**" means the United States Food and Drug Administration.

"**First Commercial Sale**" means, with respect to any CB-CAPS Monitoring Assay or any Product, the first sale for end use or consumption of such product in a country. Sales to an Affiliate or Licensee shall not constitute a First Commercial Sale unless the Affiliate or Licensee is the end user of such product.

"**Form 8-K**" has the meaning set forth in Section 10.8 of the Agreement.

"**Hazardous Substance**" means any: contaminant or pollutant; toxic, radioactive or hazardous waste, chemical, substance, material or constituent; asbestos; polychlorinated byphenyls (PCBs); paint containing lead or mercury; fixtures containing mercury or urea formaldehyde; natural or liquefied gas; flammable, explosive, corrosive, radioactive, medical and infectious waste; and oil or other petroleum product, all as defined in Environmental Laws.

"**Indemnification Demand**" has the meaning set forth in Section 9.3(a) of the Agreement.

"**Indemnified Person**" means the Person seeking indemnification pursuant to Section 9.1 or Section 9.2 of the Agreement.

"**Indemnifying Person**" means the Party obliged to provide indemnification pursuant to Section 9.1 or Section 9.2 of the Agreement.

"**Initial Cash Payment**" has the meaning set forth in Section 1.3(a) of the Agreement.

"**Intellectual Property Collateral**" has the meaning ascribed to such term in the Intellectual Property Security Agreement.

"**Intellectual Property Security Agreement**" has the meaning set forth in Section 1.5(a) of this Agreement.

"**Junior Lienholder**" has the meaning ascribed to such term in the Subordination Agreement.

"**Junior Lienholder Loan Documents**" has the meaning ascribed to such term in the Subordination Agreement.

"**Know-How**" means all proprietary inventions, technology, trade secrets, know-how, data, procedures and other information, in each case that (a) have been reduced to writing or stored electronically or are in another tangible form and (b) relate exclusively to the Products.

"**Landlord**" means ARE-SD Region No. 20, LLC, a Delaware limited liability company. "**Lease Assumption**" has the meaning set forth in Section 1.5(b) of the Agreement.

"**Legal Requirement**" means any law, rule or regulation of any governmental body.

"**Licensed IP**" means the intellectual property licensed pursuant to the Pittsburgh License, the LUMC License, the Orgentec License, and the Prometheus Licenses.

"**Licensee**" means any Person (other than any of the Parties or an Affiliate of any of the Parties) to which Purchaser or any of its Affiliates grants a license under any of the Patents.

"**LUMC License**" means that certain Exclusive License Agreement by and between Leiden University Medical Center and Subsidiary (and its successors and assigns) dated as of September 1, 2006 and as subsequently amended.

"**Matter**" means any claim, demand, dispute, action, suit, proceeding, investigation or other similar matter.

"**[***]**" means [***]

"**[***] Commercial Program**" means a commercial program wherein [***]

"**[***] Milestone**" means [***] have [***]

"**[***] Milestone Amount**" means: (i) [***]; (ii) [***]; or (iii) [***]

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

[***]

"**Milestone**" has the meaning set forth in Section 1.3(d) of the Agreement.

"**Milestone Ratio**" means a fraction, (i) the numerator of which is (a) the percentage of the list price of the Avise PG Product that, in connection with the [***] Commercial Program or the [***] Commercial Program, as applicable, [***] or [***], as applicable, and/or its Affiliates agree to pay or otherwise reimburse, or, if no agreement, providing for such payment or reimbursement is executed, pay or otherwise reimburse minus (b) [***]% and (ii) the denominator of which is [***]%.

"**MTX Technology**" means any technology incorporating methotextrate, including monitoring, genetics of response, and prediction of toxicity, based, in whole or in part, on any intellectual property rights included in the Assets.

"**Net Sales**" means, with respect to a particular time period, (i) the total amounts collected during such time period by or on behalf of Purchaser, its Affiliates, or their respective Licensees or Distributors (other than from Licensees who are not end users or from Distributors, in which case the subsequent sale or disposition of such Product by such Licensee or Distributor shall be included in Net Sales) for sales of the Products to independent purchasers in arm's length transactions less (ii) the total royalty amount paid by Purchaser to any third party under any Contract with respect to such Net Sales plus (iii) [***]. If any Product is sold or provided as part of a Combination Product, Net Sales shall be calculated by multiplying the Net Sales from the sale of such Combination Product by the fraction A/B, where "A" is the fair market value of the Product when supplied or priced separately and "B" is the fair market value of the Combination Product. In the event that no market price is available for the Product when supplied or priced separately, fair market value shall be determined in good faith by Seller and Purchaser. If Purchaser, its Affiliates, or their respective Licensees or Distributors receive non-cash consideration (a) for the Products sold or otherwise transferred to an independent third party, Net Sales for such sale or transfer will be determined based on the average of the gross invoice prices charged to other independent third parties in respect of cash sales for such Product during the applicable reporting period or (b) for Products leased or licensed, the Parties shall agree in good faith on the value of such consideration. Where the Product is sold otherwise than on an arms length basis, the price that would have been charged in an arms length sale shall be the invoice price for such Product.

"**New Products**" mean any products (other than the Existing Products) in any form or formulation that are developed using or are covered by any of the Patents or Licensed IP, including without limitation any tests based, in whole or in part, on any MTX Technology for toxicity or predicting efficacy. Notwithstanding the foregoing, for purposes of the royalty in Section 1.3(g), after the expiration of the Royalty Term in Section 1.3(e) and (f), New Products

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shall include any products that combine or integrate, in whole or in part, any Existing Product into such products.

"**Orgentec License**" means that certain License Agreement by and between Orgentec Diagnostika GmbH and Subsidiary (and its successors and assigns) dated as of February 19, 2008 and as subsequently amended.

"**Orgentec Technology**" means any technology based, in whole or in part, on the intellectual property licensed pursuant to the Orgentec License.

"**Parties**" has the meaning set forth in the introductory paragraph of the Agreement.

"**Patents**" means the patents and patent applications identified on **Schedule 2** and all divisions, continuations, continuations-in-part, reissues, extensions, reexaminations and renewals of such patents in the United States and all foreign countries.

"**Person**" means any individual, corporation, general partnership, limited partnership, limited liability company, trust, association, firm, organization, company, business, entity, union, society or governmental body.

"**[***]**" means [***]

"**[***] Commercial Program**" means a commercial program wherein [***]

"**[***] Milestone**" means the [***]

"**[***] Milestone Amount**" means: (i) [***]; (ii) [***]; or (iii) [***].

"**Pittsburgh License**" means that certain Exclusive License Agreement by and between the University of Pittsburgh – of the Commonwealth System of Higher Education and Stagemark, Inc. (and its successors and assigns) dated as of October 11, 2005 and as subsequently amended.

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"**Post-10/5 Accounts Receivable**" has the meaning set forth in Section 1.3(h) of the Agreement.

"**Pre-Closing Period**" has the meaning set forth in Section 4.1 of the Agreement.

"**Product**" means the Existing Products and the New Products.

"**Prometheus Licenses**" mean that certain License Agreement by and between Prometheus Laboratories Inc. and Subsidiary (and its successors and assigns) dated as of September 13, 2007 and as subsequently amended and that certain Sublicense Agreement by and between Prometheus Laboratories Inc. and Subsidiary (and its successors and assigns) dated as of September 13, 2007 and as subsequently amended.

"**Property Taxes**" has the meaning set forth in Section 1.4(c) of the Agreement.

"**Prorated Amount**" has the meaning in Section 5.6(a) of the Agreement.

"**Purchaser**" has the meaning set forth in the introductory paragraph of the Agreement.

"**Purchaser Financial Statements**" has the meaning set forth in Section 3.2(a) of the Agreement.

"**Reporting Period**" has the meaning set forth in Section 1.8(c) of the Agreement.

"**Response**" has the meaning set forth in Section 9.3(b) of the Agreement.

"**Royalty Term**" means a period of time beginning on the Closing Date and ending on the last payment of a royalty pursuant to any Royalty Transaction.

"**Royalty Transactions**" mean the transactions set forth in Sections 1.3(e), (f) and (g) of the Agreement.

"**Second Cash Payment**" has the meaning set forth in Section 1.3(c) of the Agreement.

"**Second Cash Payment Date**" has the meaning set forth in Section 1.3(c) of the Agreement.

"**Seller**" has the meaning set forth in the introductory paragraph of the Agreement.

"**Seller Disclosure Schedule**" means the disclosure schedule delivered by Seller to Purchaser contemporaneously with the execution and delivery of the Agreement.

"**Specified Employees**" means the employees identified on **Schedule 6**.

"**Statement Date**" has the meaning set forth in Section 3.2 of the Agreement.

"**Straddle Period**" means a period commencing before and ending after the Closing Date.

"**Subordination Agreement**" has the meaning set forth in Section 1.5(a) of the Agreement.

"**Subsequent Filings**" has the meaning set forth in Section 10.8 of the Agreement.

"**Subsidiary**" has the meaning set forth in the introductory paragraph of the Agreement.

"**Taxes**" means all sales and use taxes, Property Taxes, gross receipts taxes, documentary transfer taxes, employment taxes, withholding taxes, unemployment insurance contributions and other taxes or governmental charges of any kind, however denominated, including any interest, penalties and additions to tax in respect thereto, imposed under any federal, state, local, foreign or other applicable tax law.

"**Trademarks**" mean the trademark registrations identified on **Schedule 4**.

"**Transfer Taxes**" has the meaning set forth in Section 1.4(b) of the Agreement.

"**Transition Operating Costs**" has the meaning set forth in Section 5.6(b) of the Agreement.

"**Trigger Event**" has the meaning set forth in Section 1.9(b) of the Agreement.

"**UCC**" means the New York Uniform Commercial Code, as in effect from time to time; *provided, however*, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, priority, or remedies with respect to Seller's security interest in any Intellectual Property Collateral is governed by the Uniform Commercial Code as enacted and in effect in a jurisdiction other than the State of New York, the term "UCC" shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies.

"**U.S. Dollars**" means United States dollars.

"**Vendor Accounts**" mean contracts or accounts with utility or third party service providers to the Facility that are provided on a purchase order or open account basis, including, without limitation, those accounts set forth on **Schedule 5.6(a)**.

"**Web Site IP**" means the "avisetest.com" domain name and the contents of the "www.avisetest.com" web site.

Exhibit 10.11

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

AMENDMENT NO. ONE TO

ASSET PURCHASE AGREEMENT

between:

CYPRESS BIOSCIENCE, INC.,

PROPRIUS, INC.,

and

EXAGEN DIAGNOSTICS

Dated as of March 10, 2011

AMENDMENT NO. ONE TO ASSET PURCHASE AGREEMENT

This Amendment No. One is made as of this 10th day of March, 2011 by and among Cypress Bioscience, Inc., a Delaware corporation ("Seller"), Proprius, Inc., a Delaware corporation ("Subsidiary"), and Exagen Diagnostics, Inc., a Delaware corporation ("Purchaser" and, collectively with Seller and Subsidiary, the "Parties") to that certain Asset Purchase Agreement, dated as of October 8, 2010, by and among the Parties (the "Agreement"). Capitalized terms used but not defined herein shall have the respective meanings given to such terms in the Agreement.

RECITAL

The Parties wish to set forth herein amendments to certain provisions of the Agreement pertaining to the Acquired Xifin Accounts Receivable to, among other things, (a) change the amount Seller or Subsidiary is required to pay to Purchaser for the Acquired Xifin Accounts Receivable, including for royalties and collection fees paid by Purchaser, and (b) provide that Purchaser need not collect receivables from patients except to the extent such patients have received reimbursement from insurance companies.

AMENDMENT

The Parties, intending to be legally bound, agree as follows:

1. Amendment and Restatement of Section 1.3(h). Section 1.3(h) of the Agreement is amended and restated to read as follows:

> "(h) Within [***] days after the delivery of each monthly reconciliation contemplated by Section 1.8(f) of this Agreement, Seller or Subsidiary, as applicable, shall, subject to Section 10.17, pay to Purchaser: (i) for monthly reports within the period of time beginning on the Closing Date and ending on January 31, 2011, an amount equal to (x) [***]% multiplied by all amounts received pursuant to Acquired Xifin Accounts Receivable during such month *plus* (y) [***]% multiplied by the amount of license royalties paid by Purchaser under any Contracts which are attributable to such accounts receivable during such month *plus* (z) [***]% multiplied by the amount of the collection fee (which amount shall not exceed [***]% of the amount collected) paid by Purchaser to Xifin with respect to such accounts receivable during such month, and (ii) for monthly reports within the period of time beginning on February 1, 2011 and continuing until the end of the Acquired Xifin Accounts Term, an amount equal to (x) [***]% multiplied by all amounts received pursuant to Acquired Xifin Accounts Receivable during such month *plus* (y) [***]% multiplied by the amount of license royalties paid by Purchaser under any Contracts which are attributable to such accounts receivable during such

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month *plus* (z) [***]% multiplied by the amount of the collection fee (which amount shall not exceed [***]% of the amount collected) paid by Purchaser to Xifin with respect to such accounts receivable during such month. For accounts receivable for testing services performed by Purchaser with a date of service of October 6, 2010 or later (as defined by the blood sample draw date) (the "***Post-10/5 Accounts Receivable***"), the Parties shall, subject to Section 10.17, follow the procedures set forth under "Post-10/5 Accounts Receivable" in **Schedule 5.8.**"

2. Amendment to Section 1.7. Section 1.7 of the Agreement is amended by appending subsection (b) thereto, to read as follows:

"(b) Notwithstanding anything to the contrary in Section 1.7(a)(iii), Purchaser shall have no obligation to make any efforts to collect any patient receivables that are (i) [***] or (ii) [***]. For all collection efforts, Purchaser will have the right to use its patient financial assistance program and its reasonable billing and collection policies."

3. Treatment of Non-Xifin AR. The portion of Schedule 5.8 of the Agreement under the heading "Non-Xifin Accounts Receivable" is amended and restated to read as follows:

"Non-Xifin Accounts Receivable ("***Non-Xifin AR***")

Claims or Payments for testing Services performed by Seller or Subsidiary, as applicable, with a date of service, as defined by blood sample draw date, prior to January 12, 2010.

- Seller will retain all rights to pursue payment for Non-Xifin AR claims.
- Seller will not pursue payment for Non-Xifin AR resulting from amounts billed to patients if Seller or its agents have not received such Claims or Payments on or before March 10, 2011; provided, however, the foregoing restriction shall not apply to any Reimbursement Receivables.

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

- Purchaser will make available any information and data required to pursue Non-Xifin AR."

4. Treatment of Xifin AR. The portion of Schedule 5.8 of the Agreement under the heading "Xifin Accounts Receivable" is amended and restated to read as follows:

"Xifin Accounts Receivable ("***Xifin AR***")

Claims and Payments for testing services performed by Seller with a date of service, as defined by the blood sample draw date, of January 12, 2010 through the close of business on October 5, 2010:

- All Xifin AR will be submitted for payment using Seller provider identification numbers.
- Purchaser will work with Xifin to provide all required information for efficient processing of Xifin AR.
- Seller will provide purchaser with electronic copies of all deposits made to Seller for Xifin AR.
- On a monthly basis Purchaser will provide Seller with a reconciliation statement detailing the total collections by test for that month, the royalties owed on said payments, the collection fee owed to Xifin on said payments (per the surviving contract between Purchaser and Xifin, never to exceed [***]%), the [***]% to [***]% or [***]% to [***]% split, as applicable to such month, between Seller and Purchaser of said payments and other payments owed between Seller and Purchaser relating to the royalties and payments to Xifin.
- Seller and Purchaser will settle the monies due within 14 days after the delivery of each monthly reconciliation statement contemplated in the previous bullet point."

5. Miscellaneous. Except as expressly amended hereby, the Agreement shall remain in full force and effect in accordance with the terms thereof. This Amendment No. One will be construed in accordance with, and governed in all respects by, the laws of the State of California (without giving effect to principles of conflicts of law) and may be executed in several counterparts, each of which will constitute an original and all of which, when taken together, will constitute one agreement.

[Signatures Follow]

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

The Parties have caused this Amendment No. One to be executed as of the date first written above.

CYPRESS BIOSCIENCE, INC.

By /s/ Jeffrey A. Meckler
Name: Jeffrey A. Meckler
Title: Interim Chief Executive Officer

PROPRIUS, INC.

By /s/ Sabrina Martucci Johnson
Name: Sabrina Martucci Johnson
Title: President

EXAGEN DIAGNOSTICS, INC.

By /s/ Scott L. Glenn
Name: Scott L. Glenn
Title: Chairman and Chief Executive Officer

[Signature page to Amendment No. One]

Exhibit 10.12

AMENDMENT NO. TWO TO ASSET PURCHASE AGREEMENT

This Amendment No. Two is made as of this 21st day of August, 2012 by and among Royalty Pharma Collection Trust, a Delaware statutory trust ("Seller"), as assignee of Cypress Bioscience, Inc., a Delaware corporation, Proprius, Inc., a Delaware corporation ("Subsidiary"), and Exagen Diagnostics, Inc., a Delaware corporation ("Purchaser" and, collectively with Seller and Subsidiary, the "Parties"), the parties to that certain Asset Purchase Agreement, dated as of October 8, 2010 and amended on March 10, 2011, by and among the Parties (the "Agreement"). Capitalized terms used but not defined herein shall have the respective meanings given to such terms in the Agreement.

RECITALS

WHEREAS, pursuant to the terms of the Agreement, at the Closing, Purchaser purchased the Diagnostic Business from Seller and Subsidiary;

WHEREAS, following the Closing, certain issues have arisen between the Parties concerning, among others, claims alleging fraud, misrepresentation, unfair business practices under Cal. Bus. & Prof. Code § 17200 et seq., intentional interference with contractual relations, and intentional interference with prospective economic relations, including claims related to the collection of receivables by Seller and Subsidiary, which claims are detailed in letters from Purchaser's counsel to Seller and its counsel (the "Matter"); and

WHEREAS, the Parties desire to resolve the Matter by setting forth herein amendments to certain provisions of the Agreement.

AMENDMENT

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and adequacy of which being hereby acknowledged, the Parties hereby agree as follows:

1. Amendment and Restatement of Section 1.3(c). Section 1.3(c) of the Agreement is amended and restated to read as follows:

"(c) (i) *Issuance of Note*.

On the second anniversary of the date hereof, Purchaser will issue to Seller a promissory note (the "Note") in the aggregate principal amount of $2,000,000, the form of which is attached hereto as Exhibit A. The Note shall be secured in accordance with Section 5.9 of the Agreement. The Note shall accrue interest at a rate of 10% per annum which interest shall be payable on the last Friday of each month following the date of issuance of the Note. The outstanding principal balance on the Note shall be repaid at the rate of $41,666.67 per month on the last Friday of each month following the date of issuance of the Note. The amount of interest and principal due on the last Friday of each month following the date of issuance of the Note are as set forth on Schedule A attached to the Note.

(ii) *Mandatory Prepayment*.

The Note shall be subject to the following mandatory prepayment conditions:

(1) Upon the occurrence of a Trigger Event, the then outstanding principal balance and all accrued interest on the Note shall become immediately due and payable in full.

(2) Upon the occurrence of any material breach by Purchaser of the provisions of the Agreement or the Note, including any failure of Purchaser to pay amounts under the Note when due, Seller may, upon written notice to Purchaser, demand that the then outstanding principal balance and all accrued interest on the Note shall become immediately due and payable in full.

(3) If any of the assets of Purchaser are sold, licensed, leased, transferred or otherwise disposed of to any Person which is not a direct or indirect wholly-owned subsidiary of Purchaser, then 100% of the proceeds of any such transaction shall be applied to the outstanding principal balance on the Note.

(4) Upon the sale, on or after December 31, 2012, by Purchaser of any of its equity securities (including any debt securities convertible into equity securities of Purchaser) to any Person other than (x) sales of such securities to an existing stockholder of Purchaser or (y) issuances of incentive equity to employees, consultants or directors, then 20% of the gross proceeds of any such transaction shall be applied to the outstanding principal balance on the Note.

(5) Any such prepayment detailed in Sections 1, 2, 3 or 4 above shall be applied to installments of principal under the Note in the inverse order of maturity.

2. Amendment to First Sentence of Section 1.9(a). The first sentence of Section 1.9(a) of the Agreement shall be deleted and replaced with the following: “If any Trigger Event occurs prior to the date on which the Purchaser issues and delivers the Note to Seller, Purchaser shall become immediately obligated to pay the sum of $2,000,000 to Seller by wire transfer of immediately available funds.”

3. Amendment of Section 1.10. The phrase “Second Cash Payment” in Section 1.10 of the Agreement shall be deleted and replaced with the following: “payment obligations under the Note, subject to the acceleration of such payment obligations under Section 1.3(c)(ii)(1) of the Agreement.”

4. Release and Waiver. In consideration of the mutual agreements contained herein, the adequacy and sufficiency of which are hereby acknowledged, Purchaser hereby waives, releases, acquits and forever discharges Seller and Subsidiary and their respective Affiliates,

predecessors, successors and assigns from any and all claims, demands, actions, causes of action, liabilities and damages in law or in equity, arising out of, in connection with, or relating to, the Matter, and all matters directly and indirectly related thereto.

5. Miscellaneous. Except as expressly amended hereby, the Agreement and the Ancillary Agreements shall remain in full force and effect in accordance with the terms thereof. This Amendment No. Two will be construed in accordance with, and governed in all respects by, the laws of the State of California (without giving effect to principles of conflicts of law) and may be executed in several counterparts, each of which will constitute an original and all of which, when taken together, will constitute one agreement.

6. Trustee Capacity of Wilmington Trust Company. Notwithstanding anything contained herein to the contrary, it is expressly understood and agreed by the parties hereto that (i) this Agreement is executed and delivered by Wilmington Trust Company, not individually or personally but solely in its trustee capacity, in the exercise of the powers and authority conferred and vested in it under the Amended and Restated Trust Agreement dated as of August 9, 2011, among State Street Custodial Services (Ireland) Limited, as Trustee of Royalty Pharma Select, and Wilmington Trust Company, as owner trustee of Seller, (ii) each of the representations, undertakings and agreements herein made on the part of Seller is made and intended not as a personal representation, undertaking and agreement by Wilmington Trust Company but is made and intended for the purpose of binding only Seller and (iii) under no circumstances shall Wilmington Trust Company be personally liable for the payment of any indebtedness or expenses of Seller or be liable for the breach or failure of any obligation, representation, warranty or covenant made or undertaken by Seller under this Agreement or any related documents.

[Signatures Follow]

The Parties have caused this Amendment No. Two to be executed as of the date first written above.

ROYALTY PHARMA COLLECTION TRUST

By: Wilmington Trust Company, not in its individual capacity but solely in its capacity as owner trustee

By /s/ Yvette L. Howell
Name: Yvette L. Howell
Title: Assistant Vice President

PROPRIUS, INC.

By /s/ George W. Lloyd
Name: George W. Lloyd
Title: Authorized Person

EXAGEN DIAGNOSTICS, INC.

By /s/ Ron Rocca
Name: Ron Rocca
Title: C.E.O.

EXHIBIT A

Form of Note

SECURED PROMISSORY NOTE

$2,000,000 **October 8, 2012**

Subject to the terms and conditions of this Note, for value received, Exagen Diagnostics, Inc., a Delaware corporation (the "Borrower"), hereby promises to pay to Royalty Pharma Collection Trust, a Delaware statutory trust (the "Lender"), the principal sum of Two Million Dollars and Zero Cents ($2,000,000.00) (the "Principal Amount"), together with interest thereon accruing on and from the date hereof until the entire Balance is paid, at an annual rate equal to ten percent (10%) (the "Interest Rate"). Interest shall be calculated based on a 365-day year, compounded monthly, but in no event shall the rate of interest exceed the maximum rate, if any, allowable under applicable law. The amount of interest and principal due on the last Friday of each month following the date of issuance of this Note is as set forth on Schedule A hereto. "Balance" means, at the applicable time, the sum of all then outstanding principal of this Note, all then accrued but unpaid interest and all other amounts then accrued but unpaid under this Note.

1. Terms of Note. This Note is issued pursuant to, and is subject to the terms and entitled to the benefits of, the Asset Purchase Agreement, dated as of October 8, 2010, as amended, modified or supplemented from time to time (the "Asset Purchase Agreement"), among the Borrower, the Lender (as assignee of Seller) and Subsidiary. Terms used herein and not otherwise defined shall have the meanings set forth in the Asset Purchase Agreement.

2. Maturity. Subject to any prepayment of this Note, the principal amount of this Note shall be payable on the dates and in the amounts as set forth on Schedule A hereto.

3. Interest. Interest on this Note will accrue at the Interest Rate from the date hereof. Interest on this Note shall be payable on the dates and in the amounts as set forth on Schedule A hereto, subject to any prepayment of this Note. Following any prepayment of this Note, the interest amounts payable on this Note shall be adjusted accordingly. Notwithstanding the foregoing, in the event any payment due hereunder is not made when due, Section 1.11 of the Asset Purchase Agreement shall be applicable to such late payment.

4. Prepayment. This Note may be prepaid at any time, without premium or penalty, in whole or in part. Any prepayment of this Note shall be applied to installments of the Principal Amount in the inverse order of maturity. This Note is subject to the mandatory prepayment conditions set forth in Section 3.1(c)(ii) of the Asset Purchase Agreement. Such mandatory prepayments shall be made at the times and in the amounts as specified in the Asset Purchase Agreement.

5. Security. This Note is secured under the Intellectual Property Security Agreement, entered into concurrently with the execution and delivery of the Asset Purchase Agreement. Reference is hereby made to the Intellectual Property Security Agreement for a

description of the nature and extent of the security for this Note and the rights with respect to such security of the holder of this Note.

6. No Impairment. No provision of the Asset Purchase Agreement or this Note shall alter or impair the obligation of the Borrower, which is absolute and unconditional, to pay the principal and interest on this Note at the times, places and rates, and in the coin or currency provided in the Asset Purchase Agreement or herein.

7. No Waivers; Amendments. No failure or delay on the part of the payee hereof in exercising any right, power or remedy hereunder or under the Asset Purchase Agreement shall operate as a waiver thereof, nor shall any single or partial exercise of any such right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy. The remedies provided for herein and in the Asset Purchase Agreement are cumulative and are not exclusive of any remedies that may be available to the payee hereof at law or in equity or otherwise. This Note may not be amended and the provisions hereof may not be waived, except in accordance with the terms of the Asset Purchase Agreement.

8. Assignment. The Lender may assign this Note and its rights under the Intellectual Property Security Agreement to an Affiliate of such Lender. Such assignee shall be deemed a “Lender” for purposes of this Note. The Borrower may not assign its obligations under this Note without the prior written consent of the Lender.

9. Replacement of Note. Upon receipt by the Borrower of evidence reasonably satisfactory to it of ownership of and the loss, theft, destruction or mutilation of this Note, and (a) in the case of loss, theft or destruction of indemnity reasonably satisfactory to it, or (b) in the case of mutilation, upon surrender and cancellation of this Note, the Borrower, at its own expense, shall execute and deliver a new Note, dated and bearing interest from the date to which interest shall have been paid on this lost, stolen, destroyed or mutilated Note or dated the date of this lost, stolen, destroyed or mutilated Note if no interest shall have been paid hereon.

10. Collection Expenses. The Borrower further agrees, subject only to any limitation imposed by applicable law, to pay all expenses, including reasonable attorneys’ fees, incurred by the holder of this Note in endeavoring to collect any amounts payable hereunder which are not paid when due.

11. Payments in U.S. Dollars. All payments of principal and interest with respect to this Note are to be made in lawful money of the United States of America.

12. Governing Law. This Note shall be deemed to be a contract made under the laws of the State of California, and for all purposes shall be governed by and construed in accordance with the laws of the State of California without regard to principles of conflicts of laws thereof.

IN WITNESS WHEREOF, the Borrower has caused this Note to be duly executed and delivered as a sealed instrument on the date set forth above by the duly authorized representative of the Borrower.

BORROWER

EXAGEN DIAGNOSTICS, INC.

By _____
Name:
Title:

[Signature Page for Form of Note]

Exhibit 10.13

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

AMENDMENT NO. THREE

TO ASSET PURCHASE AGREEMENT

between:

ROYALTY PHARMA COLLECTION TRUST,

PROPRIUS, INC.

and

EXAGEN DIAGNOSTICS, INC.

Dated as of February 6 , 2013

AMENDMENT NO. THREE TO ASSET PURCHASE AGREEMENT

This Amendment No. Three is made as of this 6th day of February, 2013 by and among Royalty Pharma Collection Trust, a Delaware statutory trust ("Seller"), as assignee of Cypress Bioscience, Inc., a Delaware corporation, Proprius, Inc., a Delaware corporation ("Subsidiary"), and Exagen Diagnostics, Inc., a Delaware corporation ("Purchaser" and, collectively with Seller and Subsidiary, the "Parties"), the parties to that certain Asset Purchase Agreement, dated as of October 8, 2010, as amended on March 10, 2011 ("Amendment No. One"), August 21, 2012 ("Amendment No. Two"), and hereby ("Amendment No. Three") by and among the Parties (the Asset Purchase Agreement, as amended by Amendment Nos. One, Two and Three, collectively, the "Agreement").

Capitalized terms used but not defined herein shall have the respective meanings given to such terms in the Agreement.

RECITALS

WHEREAS, pursuant to the terms of the Agreement, at the Closing, Purchaser purchased the Diagnostic Business from Seller and Subsidiary;

WHEREAS, the Parties now wish to amend the method of payment for certain Milestones.

AMENDMENT

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and adequacy of which being hereby acknowledged, the Parties hereby agree as follows:

1. Amendment and Restatement of Section 1.3(d)(iii). Section 1.3(d)(iii) of the Agreement is amended and restated to read as follows:

"(iii) (1) Issuance of 2nd Note

Within five (5) business days after achievement of the CB-CAPS Monitoring Assay Launch Milestone, Purchaser shall issue to Seller a promissory note (the "2nd" Note") in the aggregate principal amount of [***], the form of which is attached hereto as Exhibit A. The 2nd Note shall be secured in accordance with Section 5.9 of the Agreement. The Note shall accrue interest at a rate of [***] per annum which interest shall be payable on the 10th business day following the end of each month following the date of issuance of this 2nd Note. The outstanding principal balance on the Note shall be repaid at the rate specified in Schedule A to the 2nd Note on the 10th business day following the end of each month following the date of issuance of this 2nd Note.

(2) *Mandatory Prepayment*.

The 2nd Note shall be subject to the following mandatory prepayment conditions:

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(1) Upon the occurrence of a Trigger Event, the then outstanding principal balance and all accrued interest on the 2nd Note shall become immediately due and payable in full.

(2) Upon the occurrence of any material breach by Purchaser of the provisions of the Agreement or the 2nd Note, including any failure of Purchaser to pay amounts under the 2nd Note when due, Seller may, upon written notice to Purchaser, demand that the then and the outstanding principal balance and all accrued interest on the 2nd Note shall become immediately due and payable in full.

(3) If any of the assets of Purchaser are sold, licensed, leased, transferred or otherwise disposed of to any Person which is not a direct or indirect wholly-owned subsidiary of Purchaser, then 100% of the gross proceeds of any such transaction, after any prepayment of the Note required by Section 1.3(c)(ii)(3) of the Agreement, shall be applied to prepay the then outstanding principal and accrued interest of the 2nd Note.

(4) Upon the sale, on or after December 31, 2012, by Purchaser of any of its equity securities (including any debt securities convertible into equity securities of Purchaser) to any Person other than (x) sales of such securities to an existing stockholder of Purchaser or (y) issuances of incentive equity to employees, consultants or directors, then 20% of the gross proceeds of any such transaction, after any prepayment of the Note required by Section 1.3(c)(ii)(4) of the Agreement, shall be applied to prepay the then outstanding principal and accrued interest of the 2nd Note.

(5) Any such prepayment detailed in Sections 1, 2, 3 or 4 above shall be applied to installments of principal under the Note and the 2nd Note in the inverse order of maturity."

2. Amendment to First Sentence of Section 1.9(a). The first sentence of Section 1.9(a) of the Agreement shall be deleted and replaced with the following: "If any Trigger Event occurs following the achievement of the CB-CAPS Monitoring Assay [***] Milestone but prior to the date on which the Purchaser issues and delivers the 2nd Note to Seller, Purchaser shall become immediately obligated to pay the sum of [***] to Seller by wire transfer of immediately available funds."

3. Amendment of Section 1.10. Section 1.10 of the Agreement shall be deleted and replaced with the following:

"1.10 Assumption of Obligations in Change of Control. In the event Purchaser experiences a Change of Control, Purchaser shall cause the Person acquiring Purchaser (or acquiring or exclusively licensing substantially all of its assets) with respect to a Change of Control to assume Purchaser's obligations under this Agreement, including,

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

without limitation, those obligations with respect to the Note, the 2nd Note, the [***] Milestone, the [***] Milestone, the CB-CAPS Annual Sales Milestone, the Assumed Liabilities, the royalties paid for Royalty Transactions, and the Acquired Xifin Accounts Receivable."

4. Miscellaneous. Except as expressly amended hereby, the Agreement and the Ancillary Agreements shall remain in full force and effect in accordance with the terms thereof. This Amendment No. Three will be construed in accordance with, and governed in all respects by, the laws of the State of California (without giving effect to principles of conflicts of law) and may be executed in several counterparts, each of which will constitute an original and all of which, when taken together, will constitute one agreement.

4. Trustee Capacity of Wilmington Trust Company. Notwithstanding anything contained herein to the contrary, it is expressly understood and agreed by the parties hereto that (i) this Agreement is executed and delivered by Wilmington Trust Company, not individually or personally but solely in its trustee capacity, in the exercise of the powers and authority conferred and vested in it under the Amended and Restated Trust Agreement dated as of August 9, 2011, among State Street Custodial Services (Ireland) Limited, as Trustee of Royalty Pharma Select, and Wilmington Trust Company, as owner trustee of Seller, (ii) each of the representations, undertakings and agreements herein made on the part of Seller is made and intended not as a personal representation, undertaking and agreement by Wilmington Trust Company but is made and intended for the purpose of binding only Seller and (iii) under no circumstances shall Wilmington Trust Company be personally liable for the payment of any indebtedness or expenses of Seller or be liable for the breach or failure of any obligation, representation, warranty or covenant made or undertaken by Seller under this Agreement or any related documents.

[Signatures Page Follows]

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

The Parties have caused this Amendment No. Three to be executed as of the date first written above.

ROYALTY PRARMA COLLECTION TRUST

By: Wilmington Trust. Company, not in its individual capacity but solely in its capacity as owner trustee

By: /s/ Yvette L. Howell
Name: Yvette L. Howell
Title: Assistant Vice President

PROPRIUS, INC.

By: /s/ George W. Lloyd
Name: George W. Lloyd
Title: Authorized Signatory

EXAGEN DIAGNOSTICS, INC.

By: /s/ Wendy Swedick
Name: Wendy Swedick
Title: CFO

EXHIBIT A

Form of 2nd Note

SECURED PROMISSORY 2nd NOTE

$[***] **_____, 2013**

Subject to the terms and conditions of this 2nd Note, for value received, Exagen Diagnostics, Inc., a Delaware corporation (the "Borrower"), hereby promises to pay to Royalty Pharma Collection Trust, a Delaware statutory trust (the "Lender"), the principal sum of [***] ($[* * *]) (the "Principal Amount"), together with interest thereon accruing on and from the date hereof until the entire Balance is paid, at an annual rate equal to [* * *] ([* * *]%) (the "Interest Rate"). Interest shall be calculated based on a 365-day year, compounded monthly, but in no event shall the rate of interest exceed the maximum rate, if any, allowable under applicable law. The amount of interest and principal due on the 10th business day following the end of each month following the date of issuance of this 2nd Note is as set forth on Schedule A hereto. "Balance" means, at the applicable time, the sum of all then outstanding principal of this 2nd Note, all then accrued but unpaid interest and all other amounts then accrued but unpaid under this 2nd Note.

1. Terms of 2nd Note. This 2nd Note is issued pursuant to, and is subject to the terms and entitled to the benefits of, the Asset Purchase Agreement, dated as of October 8, 2010, as amended, modified or supplemented from time to time (the "Asset Purchase Agreement"), among the Borrower, the Lender (as assignee of Seller) and Subsidiary. Terms used herein and not otherwise defined shall have the meanings set forth in the Asset Purchase Agreement.

2. Maturity. Subject to any prepayment of this 2nd Note, the principal amount of this 2nd Note shall be payable on the dates and in the amounts as set forth on Schedule A hereto.

3. Interest. Interest on this 2nd Note will accrue at the Interest Rate from the date hereof. Interest on this 2nd Note shall be payable on the dates and in the amounts as set forth on Schedule A hereto, subject to any prepayment of this 2nd Note. Following any prepayment of this 2nd Note, the interest amounts payable on this 2nd Note shall be adjusted accordingly. Notwithstanding the foregoing, in the event any payment due hereunder is not made when due, Section 1.11 of the Asset Purchase Agreement shall be applicable to such late payment.

4. Prepayment. This 2nd Note may be prepaid at any time, without premium or penalty, in whole or in part. Any prepayment of this 2nd Note shall be applied to installments of the Principal Amount in the inverse order of maturity. This Note is subject to the mandatory prepayment conditions set forth in Section 1.3(d)(iii) of the Asset Purchase Agreement. Such mandatory prepayments shall be made at the times and in the amounts as specified in the Asset Purchase Agreement.

5. Security. This Note is secured under the Intellectual Property Security Agreement, entered into concurrently with the execution and delivery of the Asset Purchase Agreement. Reference is hereby made to the Intellectual Property Security Agreement for a description of the nature and extent of the security for this Note and the rights with respect to such security of the holder of this Note.

6. No Impairment. No provision of the Asset Purchase Agreement or this 2nd Note shall alter or impair the obligation of the Borrower, which is absolute and unconditional, to pay

the principal and interest on this 2nd Note at the times, places and rates, and in the coin or currency provided in the Asset Purchase Agreement or herein.

7. No Waivers; Amendments. No failure or delay on the part of the payee hereof in exercising any right, power or remedy hereunder or under the Asset Purchase Agreement shall operate as a waiver thereof, nor shall any single or partial exercise of any such right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy. The remedies provided for herein and in the Asset Purchase Agreement are cumulative and are not exclusive of any remedies that may be available to the payee hereof at law or in equity or otherwise. This 2nd Note may not be amended and the provisions hereof may not be waived, except in accordance with the terms of the Asset Purchase Agreement.

8. Assignment. The Lender may assign this 2nd Note and its rights under the Intellectual Property Security Agreement to an Affiliate of such Lender. Such assignee shall be deemed a "Lender" for purposes of this 2nd Note. The Borrower may not assign its obligations under this 2nd Note without the prior written consent of the Lender.

9. Replacement of 2nd Note. Upon receipt by the Borrower of evidence reasonably satisfactory to it of ownership of and the loss, theft, destruction or mutilation of this 2nd Note, and (a) in the case of loss, theft or destruction of indemnity reasonably satisfactory to it, or (b) in the case of mutilation, upon surrender and cancellation of this 2nd Note, the Borrower, at its own expense, shall execute and deliver a new 2nd Note, dated and bearing interest from the date to which interest shall have been paid on this lost, stolen, destroyed or mutilated 2nd Note or dated the date of this lost, stolen, destroyed or mutilated 2nd Note if no interest shall have been paid hereon.

10. Collection Expenses. The Borrower further agrees, subject only to any limitation imposed by applicable law, to pay all expenses, including reasonable attorneys' fees, incurred by the holder of this 2nd Note in endeavoring to collect any amounts payable hereunder which are not paid when due.

11. Payments in U.S. Dollars. All payments of principal and interest with respect to this 2nd Note are to be made in lawful money of the United States of America.

12. Governing Law. This 2nd Note shall be deemed to be a contract made under the laws of the State of California, and for all purposes shall be governed by and construed in accordance with the laws of the State of California without regard to principles of conflicts of laws thereof.

[Signatures Page Follows]

IN WITNESS WHEREOF, the Borrower has caused this 2nd Note to be duly executed and delivered as a sealed instrument on the date set forth above by the duly authorized representative of the Borrower.

BORROWER

EXAGEN DIAGNOSTICS, INC.

By: _____

Name:
Title:

SCHEDULE A
- ATTACHMENT TO 2ND NOTE

[***]

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit 10.14

AMENDMENT NO. FOUR TO ASSET
PURCHASE AGREEMENT AND CONSENT

EXAGEN DIAGNOSTICS, INC. (“Exagen”) and ROYALTY PHARMA COLLECTION TRUST (“Royalty Pharma”) agree:

Section 1. Background. Cypress Bioscience, Inc. (“Cypress”), Proprius, Inc. (‘‘Proprius”) and Exagen are parties to the Asset Purchase Agreement dated as of October 8, 2010 (as amended by Amendment No. One thereto dated as of March 10, 2011, Amendment No. Two thereto dated as of August 21, 2012 and Amendment No. Three thereto dated as of February 6, 2013 (“Amendment No. Three’’), the “APA”) and the Intellectual Property Security Agreement (as defined in the APA and, together with the APA, the “Agreements”). Royal Pharma is the assignee of Cypress’s interest in the Agreements.

Section 2. Consent. Exagen has informed Royal Pharma that Exagen wishes to enter into a financing arrangement with respect to which Exagen’s obligations will be secured by, among other assets, the Intellectual Property Collateral (as defined in the APA). Notwithstanding any provision of the Agreements, including without limitation Section 5.10 of the APA, to the contrary, Royal Pharma consents to the granting by Exagen of a security interest in and lien on the Intellectual Property Collateral in connection with such financing arrangement and to the filing of financing statements. assignments and the like to perfect such security interest and lien so long as Exagen incurs no monetary obligation under such financing arrangement (other than for nominal transaction costs to be paid at closing) before payment in full of the Secured Promissory Note dated October 8, 2012 (the ‘‘Note”) made by Exagen and payable to the order of Royalty Pharma in the original principal amount of $2,000,000, the outstanding principal amount of which on the date of this Amendment No. Four to Asset Purchase Agreement and Consent (“Amendment No. Four”) is $1,500,000.

Section 3. Release of Lien. Upon payment in full of the Note. the security interest in and lien on the Intellectual Property Collateral in favor of Royalty Pharma (or Cypress as Royalty Pharma’s predecessor in interest) will be automatically terminated and released without further action by Royalty Pharma and Exagen will be authorized to file (a) an assignment to Royalty Pharma of any financing statement covering the Intellectual Property Collateral naming Cypress as secured party, (b) a termination statement with respect to any financing statement covering the Intellectual Property Collateral naming Royalty Pharma as secured party, and (c) any other document or instrument reasonably necessary to give effect to such release.

Section 4. Amendments.

(a) Sections 1 and 2 of Amendment No. Three are replaced in their entirety with the following: “Within five (5) business days after achievement of the CB-CAPS Monitoring Assay Launch Milestone, Purchase shall pay Seller $1,000,000.”

(b) Section 3 of Amendment No. Three is amended by deleting therefrom the reference to "the 2nd Note."

Section 5. Miscellaneous. Except as expressly amended or consented to hereby, the Agreements and the Ancillary Agreements (as defined in the APA) shall remain unchanged and in full force and effect in accordance with the terms thereof. This Amendment No. Four will be construed in accordance with, and governed in all respects by, the laws of the State of California (without giving effect to the principles of conflicts of law) and may be executed in several counterparts, each of which will constitute an original and all of which, when taken together will constitute one agreement.

Section 6. Trustee Capacity of Wilmington Trust Company. Notwithstanding anything contained herein to the contrary, it is expressly understood and agreed by the parties hereto that (i) this Amendment No. Four is executed and delivered by Wilmington Trust Company, not individually or personally but solely in its trustee capacity, in the exercise of the powers and authority conferred and vested in it under the Amended and Restated Trust Agreement dated as of August 9, 2011, among State Street Custodial Services (Ireland) Limited. as Trustee of Royalty Pharma Select, and Wilmington Trust Company, as owner trustee of Seller, (ii) each of the representations, undertakings and agreements herein made on the part of Seller is made and intended not as a personal representation, undertaking or agreement by Wilmington Trust Company but is made and intended for the purpose of binding only Seller and (iii) under no circumstances shall Wilmington Trust Company be personally liable for the payment of any indebtedness or expenses of Seller or be liable for the breach or failure of any obligation, representation, warranty or covenant made or undertaken by Seller under this Amendment No. Four or any related documents.

Dated: October 8, 2013

EXAGEN DIAGNOSGICS, INC.

By: /s/ Ron Rocca
Its Ron Rocca

ROYALTY PHARMA COLLECTION TRUST

By Wilmington Trust Company, not in its individual capacity, but solely in its capacity as owner trustee

By: /s/ Yvette L. Howell
Its Yvette L. Howell
Assistant Vice President

Exhibit 10.15

AMENDMENT NO. FIVE TO ASSET PURCHASE AGREEMENT

This Amendment No. Five is made as of this 26th day of January, 2016 by and among Royalty Pharma Collection Trust, a Delaware statutory trust ("Seller"), as assignee of Cypress Bioscience, Inc., a Delaware corporation, Proprius, Inc., a Delaware corporation ("Subsidiary"), and Exagen Diagnostics, Inc., a Delaware corporation ("Purchaser" and, collectively with Seller and Subsidiary, the "Parties"), the parties to that certain Asset Purchase Agreement, dated as of October 8, 2010, by and among the Parties, as amended by Amendment No. One thereto dated March 10, 2011, Amendment No. Two thereto dated August 21, 2012, Amendment No. Three thereto dated February 6, 2013 and Amendment No. Four thereto dated October 8, 2013 (the "Agreement"). Capitalized terms used but not defined herein shall have the respective meanings given to such terms in the Agreement.

RECITALS

WHEREAS, pursuant to the terms of the Agreement, at the Closing, Purchaser purchased the Diagnostic Business from Seller and Subsidiary; and

WHEREAS, the Parties now desire to amend the timing for payment of certain Milestones.

AMENDMENT

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and adequacy of which being hereby acknowledged, the Parties hereby agree as follows:

1. Amendment and Restatement of Section 1.3(d)(iv). Section 1.3(d)(iv) of the Agreement is amended and restated to read as follows:

> "(iv) within thirty (30) days after the end of the month in which the CB-CAPS Annual Sales Milestone is first achieved, Purchaser will pay to Seller the sum of $1,000,000, and within ninety-two (92) days after the end of the month in which the CB-CAPS Annual Sales Milestone is first achieved, Purchaser with pay to Seller an additional sum of $1,000,000;"

2. Miscellaneous. Except as expressly amended hereby, the Agreement and the Ancillary Agreements shall remain in full force and effect in accordance with the terms thereof. This Amendment No. Five will be construed in accordance with, and governed in all respects by, the laws of the State of California (without giving effect to principles of conflicts of law) and may be executed in several counterparts, each of which will constitute an original and all of which, when taken together, will constitute one agreement.

3. Trustee Capacity of Wilmington Trust Company. Notwithstanding anything contained herein to the contrary, it is expressly understood and agreed by the parties hereto that (i) this Agreement is executed and delivered by Wilmington Trust Company, not individually or personally but solely in its trustee capacity, in the exercise of the powers and authority conferred and vested in it under the Amended and Restated Trust Agreement dated as of August 9, 2011,

among State Street Custodial Services (Ireland) Limited, as Trustee of Royalty Pharma Select, and Wilmington Trust Company, as owner trustee of Seller, (ii) each of the representations, undertakings and agreements herein made on the part of Seller is made and intended not as a personal representation, undertaking and agreement by Wilmington Trust Company but is made and intended for the purpose of binding only Seller and (iii) under no circumstances shall Wilmington Trust Company be personally liable for the payment of any indebtedness or expenses of Seller or be liable for the breach or failure of any obligation, representation, warranty or covenant made or undertaken by Seller under this Agreement or any related documents.

[Signature Page Follows]

The Parties have caused this Amendment No. Five to be executed as of the date first written above.

ROYALTY PHARMA COLLECTION TRUST

By: Wilmington Trust Company, not in its individual capacity but solely in its capacity as owner trustee

By: /s/ Erwin M. Soriano
Name: Erwin M. Soriano
Title: Vice President

EXAGEN DIAGNOSTICS, INC.

By: /s/ Fortunato Ron Rocca
Name: Fortunato Ron Rocca
Title: President and Chief Executive Officer

Exhibit 10.16

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

AMENDMENT NO. SIX TO ASSET PURCHASE AGREEMENT

This Amendment No. Six is made as of this 16th day of February, 2017, by and among Royalty Pharma Collection Trust, a Delaware statutory trust, as successor to both Cypress Bioscience, Inc. ("*Seller*") and Proprius, Inc. ("*Subsidiary*"), and Exagen Diagnostics, Inc., a Delaware corporation ("*Purchaser*" and, collectively with Seller and Subsidiary, the "*Parties*"), the parties to that certain Asset Purchase Agreement, dated as of October 8, 2010, by and among the Parties, as amended by Amendment No. One thereto dated March 10, 2011, Amendment No. Two thereto dated August 21, 2012, Amendment No. Three thereto dated February 6, 2013, Amendment No. Four thereto dated October 8, 2013 and Amendment No. Five thereto dated January 26, 2016 (the "*Agreement*"). Capitalized terms used but not defined herein shall have the respective meanings given to such terms in the Agreement.

RECITALS

WHEREAS, pursuant to the terms of the Agreement, at the Closing, Purchaser purchased the Diagnostic Business from Seller and Subsidiary;

WHEREAS, in order to better align the payment obligations with the potential economic opportunities of the CB-CAPS Product, the parties wish to amend certain provisions of the Agreement to restructure the payments required to be made to Seller;

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. Deletion of Section 1.3(d)(iii). Section 1.3(d)(iii) of the Agreement is hereby amended by deleting "[* * *]" and inserting in its place:

"[* * *] (the "*CB-CAPS Monitoring Assay Royalty Prepayment*"). In addition, from the date of the First Commercial Sale of the first CB-CAPS Monitoring Assay in any country through December 31, 2023, Purchaser shall pay to Seller royalties of [* * *] of the Net Sales of all CB-CAPS Monitoring Assays anywhere in the world (the "*CB- CAPS Monitoring Assay Royalty*"). The Royalty Prepayment shall be fully creditable against the CB-CAPS Monitoring Assay Royalty. The obligation of Purchaser to pay the CB-CAPS Monitoring Assay Royalty shall expire and shall be of no further effect upon the earlier of (A) the date on which cumulative payments of the CB-CAPS Monitoring Assay Royalty are equal to at least [* * *] or (B) January 1, 2024;"

* * * Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

2. Amendment and Restatement of Section l .3(g). Section 1.3(g) of the Agreement is amended and restated to read as follows:

(g) Purchaser shall, subject to Section 10.17, pay to Subsidiary royalties of [* * *] of the Net Sales of any New Product, for sales occurring during the period beginning on the date of the First Commercial Sale of each such New Product and ending on December 31, 2020 (for purposes of clarity, (i) the Parties acknowledge and agree that, until the end of the applicable Royalty Term set forth in Section l.3(e) or (f), as applicable, any New Product that may also be deemed an Existing Product shall be paid the royalties set forth in Section l .3(e) or (f), as applicable, without duplication of royalties set forth in this Section l .3(g) and, following the end of such applicable royalty term, the royalties set forth in this Section l .3(g) shall apply, (ii) the CB-CAPS Monitoring Assay with respect to which the CB-CAPs Monitoring Royalty is paid is an example of a New Product that is also an Existing Product as described in clause (i) of this parenthetical and, as such, Purchaser shall, subject to Section 10.17, pay to Seller royalties of [* * *] of the Net Sales of such CB-CAPS Monitoring Assay from the date of the First Commercial Sale of such CB-CAPS Monitoring Assay in any country through the 8th anniversary of the First Commercial Sale of the first CB-CAPS Product in any country, and thereafter through December 31, 2020 shall, subject to Section 10.17, pay to Subsidiary royalties of [* * *] of the Net Sales of such CB-CAPS Monitoring Assay); and (iii) the royalties due under this Section l.3(g) with respect to the first CB-CAPS Monitoring Assay are in addition to the CB-CAPS Monitoring Assay Royalty described in Section 1.3(d) (iii); and

3. Amendment to Section l.7(a). The final sentence of Section l.7(a) of the Agreement is amended to delete “December 31, 2011” and replace it with “ December 31, 2018”.

4. Miscellaneous. Except as expressly amended hereby, the Agreement and the Ancillary Agreements shall remain in full force and effect in accordance with the terms thereof. This Amendment No. Six will be construed in accordance with, and governed in all respects by, the internal laws of the State of California (without giving effect to principles of conflicts of laws) and may be executed in several counterparts, each of which will constitute an original and all of which, when taken together, will constitute one agreement.

* * * Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5. Trustee Capacity of Wilmington Trust Company. Notwithstanding anything contained herein to the contrary, it is expressly understood and agreed by the Parties hereto that (i) this Amendment No. Six is executed and delivered by Wilmington Trust Company, not individually or personally but solely in its trustee capacity, in the exercise of the powers and authority conferred and vested in it under the trust agreement of Seller, (ii) each of the representations,

undertakings and agreements herein made on the part of Seller is made and intended not as a personal representation, undertaking and agreement by Wilmington Trust Company but is made and intended for the purpose of binding only Seller and (iii) under no circumstances shall Wilmington Trust Company be personally liable for the payment of any indebtedness or expenses of Seller or be liable for the breach or failure of any obligation , representation , warranty or covenant made or undertaken by Seller under this Agreement or any related documents.

The Parties have caused this Amendment No. Six to be executed as of the date first written above.

EXAGEN DIAGNOSTICS, INC.

/s/ Ron Rocca

Name: Ron Rocca
Title: CEO

ROYALTY PHARMA COLLECTION TRUST

By: Wilmington Trust Company, not in its individual capacity but solely in its capacity as owner trustee

/s/ Eric A. Kardash

Name: Eric A. Kardash
Title: Assistant Vice President

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT

This Agreement is made and entered into as of the 2nd day of August, 2011 ("EFFECTIVE DATE"), by and between the UNIVERSITY OF PITTSBURGH - OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION, a non-profit corporation organized and existing under the laws of the Commonwealth of Pennsylvania, with an office at 200 Gardner Steel Conference Center, Thackeray and O'Hara Streets, Pittsburgh, Pennsylvania 15260 ("UNIVERSITY"), and EXAGEN DIAGNOSTICS, INC., a corporation organized and existing under the laws of Delaware, having an office at 801 University Blvd. SE Suite 103 Albuquerque, NM 87106 ("LICENSEE").

WHEREAS, UNIVERSITY is the owner by assignment from the inventors of certain PATENT RIGHTS, entitled "Diagnosis and Monitoring of Systemic Lupus Erythematosus," developed by Drs. Susan Manzi and Joseph Ahearn of the UNIVERSITY faculty, consisting of certain patents and patent applications, and the UNIVERSITY has the right to grant licenses under such PATENT RIGHTS;

WHEREAS, UNIVERSITY desires to have the PATENT RIGHTS utilized in the public interest;

WHEREAS, LICENSEE has represented to UNIVERSITY, to induce UNIVERSITY to enter into this Agreement, that LICENSEE is experienced in the development, production, manufacture, marketing and sale of products and/or the use of similar products to the LICENSED TECHNOLOGY and that LICENSEE shall commit itself to a thorough, vigorous and diligent program of exploiting the PATENT RIGHTS so that public utilization results therefrom;

WHEREAS, UNIVERSITY and CYPRESS BIOSCIENCE, INC., as successor in interest to CELLATOPE CORPORATION (formerly STAGEMARK, INC.), entered into an Exclusive License Agreement dated as of October 11, 2005, as amended by a First Amendment to Exclusive License Agreement dated May 25, 2006, a Second Amendment to Exclusive License Agreement on February 21, 2007, a Third Amendment to Exclusive License Agreement on February 23, 2009, and a Fourth Amendment to Exclusive License Agreement on September 21, 2010;

WHEREAS, CYPRESS BIOSCIENCE, INC. assigned the Exclusive License Agreement, as amended, to EXAGEN DIAGNOSTICS, INC., by an Assignment and Assumption Agreement dated October 16, 2010; and

WHEREAS, LICENSEE desires to amend and restate in its entirety the Exclusive License Agreement, as amended, and to obtain a license under the PATENT RIGHTS upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto, intending to be legally bound, agree as follows:

ARTICLE I - DEFINITIONS

For purposes of this Agreement, the following words and phrases shall have the following meanings:

1.1 "AFFILIATE" shall mean, with respect to the UNIVERSITY, any clinical or research entity that is operated or managed as a facility under the UPMC Health System, whether or not owned by UNIVERSITY.

1.2 "COMMERCIALLY REASONABLE BEST EFFORTS" shall mean, with respect to the research, development and commercialization of any product, compound or process, the level of efforts and resources used by [***]

1.3 "LICENSEE" shall mean Exagen Diagnostics, Inc. and all entities at least fifty percent (50%) owned or controlled by Exagen Diagnostics, Inc.

1.4 "LICENSED TECHNOLOGY" shall mean any product or part thereof or service which is:

(a) Covered in whole or in part by an issued, unexpired or pending claim contained in the PATENT RIGHTS in the country in which any such product or part thereof is made, used or sold or in which any such service is used or sold; and

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) Manufactured by using a process or is employed to practice a process which is covered in whole or in part by an issued, unexpired claim or a pending claim contained in the PATENT RIGHTS in the country in which any such process in the SLE FIELD is used or in which such product or part thereof or service is used or sold.

1.5 "NON-COMMERCIAL EDUCATION AND RESEARCH PURPOSES" shall mean use of PATENT RIGHTS (including distribution of biological materials covered by the PATENT RIGHTS) for academic research or other not-for-profit scholarly purposes which are undertaken at a nonprofit or governmental institution that does not use the PATENT RIGHTS in the production or manufacture of products for sale or the performance of services for a fee.

1.6 "NON-ROYALTY SUBLICENSE INCOME" shall mean [***] pursuant to any sublicense granted pursuant to Section 2.3 hereunder, provided however, that NON ROYALTY SUBLICENSE INCOME does not include any [***].

1.7 "PATENT RIGHTS" shall mean UNIVERSITY intellectual property described below and assigned to the UNIVERSITY:

(a) The United States and foreign patents and/or patent applications listed in Exhibit A;

(b) United States and foreign patents issued from the applications listed in Exhibit A and from divisionals and continuations and continuations in part of these applications; and

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(c) Claims of U.S. and foreign continuation in part and divisional applications, and of the resulting patents, which are directed to subject matter specifically described in the U.S. and foreign applications listed in Exhibit A.

For the avoidance of doubt, PATENT RIGHTS specifically excludes the patents and/or patent applications listed in Exhibit B and any U.S. and foreign patents issued therefrom and any divisionals, continuations, and continuations in part of these applications.

1.8 "NET SALES" shall mean gross invoice price actually charged by LICENSEE or its Sublicensee to third parties for LICENSED TECHNOLOGY and services or testing using the LICENSED TECHNOLOGY and services, less the following deductions where they are factually applicable and are not already reflected in the gross invoice price:

(a) Actual cost of freight, shipping and insurance charges or freight absorption, separately stated in such invoice;

(b) Actual trade, quantity or cash discounts actually allowed, to include discounts to managed care organizations, so long as such discounts: (i) are in amounts customary in the trade, and (ii) do not violate federal state laws or regulations;

(c) Actual credits and allowances granted for product returns, rejection for damages and recalls;

(d) Rebates paid or credited to managed care organizations and governmental agencies with respect to Medicaid, Medicare or similar state and federal government programs; and

(e) Sales taxes, tariff duties and/or use taxes actually paid and separately stated on each invoice.

1.9 "SLE FIELD" shall mean any and all applications of the Patent Rights in Systemic Lupus Erythematosus.

1.10 "TERRITORY" shall mean worldwide.

ARTICLE 2 – GRANT

2.1 Subject to the terms and conditions of this Agreement, UNIVERSITY hereby grants to LICENSEE, to the extent it may lawfully do so, the right and exclusive license in the TERRITORY to make, have made, use, offer for sale, import and sell the LICENSED TECHNOLOGY in the SLE FIELD and to practice under the PATENT RIGHTS in the SLE FIELD to the end of the term for which the PATENT RIGHTS are granted, unless this Agreement is terminated as provided herein. UNIVERSITY reserves the royalty-free, nonexclusive right to practice under the PATENT RIGHTS for NON-COMMERCIAL EDUCATION AND RESEARCH PURPOSES and to use the LICENSED TECHNOLOGY for NON-COMMERCIAL EDUCATION AND RESEARCH PURPOSES.

2.2 The license granted hereby is subject to the rights of the United States government, if any, as set forth in 35 U.S.C. §200, et seq. Pursuant to this law, the United States government may have acquired a nonexclusive, nontransferable, paid up license to practice or have practiced for or on behalf of the United States the inventions described in the PATENT RIGHTS throughout the world. Pursuant to 35 U.S.C. §200, el seq. LICENSED TECHNOLOGY produced for sale in the United States shall be substantially manufactured in the United States (unless a waiver under 35 U.S.C. §204 is granted by the appropriate United States government agencies).

2.3 LICENSEE shall have the right to enter into sublicensing arrangements (without the right for further sublicense) for the rights, privileges and licenses granted hereunder. Prior written approval of each sublicensee by UNIVERSITY which approval shall not be unreasonable withheld or delayed, will be required for all sublicensees, except in such cases where the sublicense: (1) has at least one FDA approved medical diagnostic test currently on the market: and (2) has yearly revenues from the commercial sale of diagnostic products in excess of [***] dollars ($[***]). Upon termination of this Agreement, rights of any sublicensee granted by Licensee pursuant to this Section 2.3 shall survive such termination at the written request of such sublicensees provided to UNIVERSITY, provided that the action or inaction of such sublicense was not the cause of such termination.

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

2.4 LICENSEE agrees that any sublicense granted by it shall provide that the obligations to UNIVERSITY of Articles 2, 7, 8, 9, 10, and 13 of this Agreement shall be binding upon the sublicensee as if it were party to this Agreement. Each sublicense granted by LICENSEE pursuant to this Agreement shall include an audit right by UNIVERSITY of sublicensee of the same scope as provided in Section 5.2 with respect to LICENSEE.

2.5 LICENSEE agrees to forward to UNIVERSITY a copy of any and all sublicense agreements promptly upon execution thereof, but in no event later than thirty (30) days after each such sublicense agreement has been executed by both parties thereto.

2.6 The license granted hereunder shall not be construed to confer any rights upon LICENSEE by implication, estoppel or otherwise as to any technology other than PATENT RIGHTS.

ARTICLE 3 - DUE DILIGENCE

3.1 LICENSEE shall use its commercially reasonable best efforts to bring the LICENSED TECHNOLOGY to market as soon as practicable, consistent with sound and reasonable business practice and judgment, and to continue active, diligent marketing efforts for the LICENSED TECHNOLOGY throughout the term of this Agreement.

3.2 In addition, LICENSEE shall adhere to each of the following milestones in the SLE FIELD:

(a) Within twelve (12) months from the Effective Date of this Agreement, the sale or offer for sale of at least one (1) test system with clinical utility, diagnosis or monitoring, in Systemic Lupus Erythematosus;

(b) Within twenty four months (24) from the Effective Date of this Agreement, begin clinical trials for monitoring claims; and

(c) Within twenty four months (24) from the Effective Date of this Agreement, seek expansion of use of the Licensed Technology outside the United States.

3.3 LICENSEE's failure to perform in accordance with Section 3.1 or to fulfill on a timely basis anyone of the milestones set forth in Section 3.2 hereof shall be grounds for UNIVERSITY to terminate this Agreement pursuant to Section 10.2(a); except that for a single time, if a milestone in Section 3.2 has not been completed within the time frame allotted through no fault of LICENSEE and following the best efforts of LICENSEE to meet such milestone, LICENSEE may, on a one-time basis, notify the UNIVERSITY in writing that it desires a single six (6) month extension to meet such milestone and LICENSEE shall be deemed to have fulfilled the milestone requirement if LICENSEE makes a penalty payment of [***] dollars ($[***]) with both notice and penalty payment to be received by the UNIVERSITY within ten days of the applicable milestone achievement date. In such case the LICENSEE and UNIVERSITY shall negotiate a new time for attainment of such missed milestone (not to exceed six months) and subsequent timeframes relying upon the meeting of previous milestones may also be adjusted. If LICENSEE fails to meet any revised milestone including first missed milestone, UNIVERSITY may terminate the License and upon termination all rights and interest to the PATENT RIGHTS and any other rights granted by UNIVERSITY shall revert to UNIVERSITY.

ARTICLE 4 - LICENSE CONSIDERATION

4.1 In consideration of the rights, privileges and license granted by UNIVERSITY hereunder, LICENSEE shall pay royalties and other monetary consideration as follows:;

(a) Annual maintenance fees, non-refundable and non-creditable against royalties, until the first NET SALES occur as follows:

(i) [***] Dollars ($[***]) on the first and second anniversary of the EFFECTIVE DATE of this Agreement; and

(ii) [***] Dollars ($[***]) on the third anniversary of the EFFECTIVE DATE of this Agreement and annually thereafter until the first NET SALES.

Upon the first NET SALES, no further maintenance fees shall be due hereunder.

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) Royalties in an amount equal to [***] Percent ([***]%) of NET SALES of the LICENSED TECHNOLOGY per calendar quarter and royalties in an amount equal to [***] Percent ([***]%) of sublicensee NET SALES per calendar quarter;

(c) Beginning with the first NET SALES, a minimum royalty in the following amounts, if such minimum royalty is greater than the aggregate annual royalty computed in accordance with Section 4.1(b) above:

(i) [***] Dollars ($[***]) per calendar year for the first calendar year of the first NET SALES;

(ii) [***] Dollars ($[***]) per calendar year for the second calendar year of the first NET SALES; and

(iii) [***] Dollars ($[***]) in each subsequent calendar year during the term of this Agreement.

(d) Milestone payments shall be paid by LICENSEE to UNIVERSITY as follows:

(i) Two Hundred Thousand Dollars ($200,000) payable within [***] days following [***] NET SALES in a calendar year.

(e) A share of NON-ROYALTY SUBLICENSE INCOME of [***] Percent ([***]%).

4.2 In the event that it should prove necessary for LICENSEE to license intellectual property rights owned by a third party in order to practice the LICENSED TECHNOLOGY in the SLE FIELD in order to avoid infringing the patent or other intellectual property rights of such third party, then LICENSEE shall be entitled to a credit of such third party royalties against royalties due to UNIVERSITY under Section 4.1(b), and Section 4.1(c), provided that (i) in no event shall the royalty rate applicable to NET SALES in the SLE FIELD be less than [***] percent ([***]%) and (ii) in no event shall the royalty rate applicable to NET SALES in the SLE FIELD from a sub-Licensee be less than [***] percent ([***]%).

4.3 All payments pursuant to this Agreement may be made by check or by wire transfer (along with applicable wire transfer fees) in United States dollars without deduction or exchange, collection or other charges and directed to the address or , in the case of wire

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transfer, to the bank, set forth in Article II. Annual maintenance payments pursuant to Section 4.1(a) hereof shall be paid on the anniversary of the EFFECTIVE DATE of the calendar year in which they are due. Royalty payments pursuant to Section 4.1 (b) hereof shall be due within thirty (30) days after each March 31, June 30, September 30 and December 31. The minimum annual royalty for any calendar year pursuant to Section 4.1(c) shall be paid by January 30 of the subsequent calendar year. NONROYALTYSUBLICENSE INCOME payments pursuant to Section 4.1(e) hereof shall be paid within thirty (30) days after receipt of payment by LICENSEE from sublicense. Payments under Section 4.1(b) are payable on a country by country basis only in those countries in which there are PATENT RIGHTS with respect to the applicable LICENSED TECHNOLOGY.

4.4 Taxes imposed by any foreign or United States governmental agency on any payments to be made to the UNIVERSITY by LICENSEE hereunder shall be paid by LICENSEE without deduction from any payment due to the UNIVERSITY hereunder.

4.5 Payments pursuant to this Agreement, including those specified in Section 6.2, which are overdue shall bear interest calculated from the due date until payment is received at the rate of five percent (5%) per annum, or the prime rate (as quoted by The Wall Street Journal) plus two percent (2%), whichever is higher. Payment of such interest by LICENSEE shall not negate or waive the right of UNIVERSITY to seek any other remedy, legal or equitable, to which it may be entitled because of the delinquency of any payment, including, but not limited to, termination of this Agreement as set forth in Article 10.

4.6 LICENSEE shall sell products and/or processes resulting from LICENSED TECHNOLOGY to UNIVERSITY and its AFFILIATES upon request at such price(s) and on such terms and conditions as such products and/or processes are made available to LICENSEE’S most favored customer.

ARTICLE 5 - REPORTS

5.1 Within sixty (60) days after each March 31, June 30, September 30 and December 31 of each year during the term of this Agreement beginning in the year of the first commercial

sale of LICENSED TECHNOLOGY, LICENSEE shall deliver to UNIVERSITY true, accurate and detailed reports of :

(a) Number of product and service NET SALES, each stated separately, for LICENSEE and all sublicensees;

(b) Total billings and receivables for all such products and services;

(c) Deductions set forth in Section 1.8, each stated separately;

(d) Total royalties due;

(e) Name and addresses of sublicensees; and

(f) Total NON-ROYALTY SUBLICENSE INCOME received during such calendar quarter and total amount of payment due pursuant to Section 4.1(e).

5.2 LICENSEE shall keep full, true and accurate books of account, in accordance with generally accepted accounting principles, containing all information that may be necessary for the purpose of showing the amounts payable to UNIVERSITY hereunder. Such books of account shall be kept at LICENSEE's principal place of business. Such books and the supporting data related thereto shall be made available at reasonable times for no more than once a calendar year for [***] years following the end of the calendar year to which they pertain to the inspection of UNIVERSITY or its agents for the purpose of verifying LICENSEE'S royalty statement or compliance in other respects with this Agreement. The fees and expenses of UNIVERSITY'S representatives shall be borne by UNIVERSITY; however, if an error of more than the greater of [***] percent ([***]%) of the total payments or the cost of such an audit due or owing for any year is discovered, then LICENSEE shall bear the fees and expenses of UNIVERSITY'S representatives.

5.3 No later than ninety (90) days after December 31 of each calendar year during the term of this Agreement, LICENSEE shall provide to UNIVERSITY a written annual progress report, describing LICENSEE'S progress on market introduction and milestones relating

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to the LICENSED TECHNOLOGY during the preceding twelve month period ending December 31.

ARTICLE 6 -PATENT PROSECUTION

6.1 UNIVERSITY has or shall apply for and seek prompt issuance of and maintain during the term of this Agreement the PATENT RIGHTS in the United States and in such foreign countries as may be designated by LICENSEE in a written notice to UNIVERSITY within a reasonable time in advance of the required foreign filing dates. LICENSEE shall have the opportunity to advise and cooperate with UNIVERSITY in the prosecution, filing and maintenance of such patents. If UNIVERSITY decides to abandon the preparation, filing, prosecution or maintenance of any patent or patent application covered by the PATENT RIGHTS, then UNIVERSITY shall provide written notice to LICENSEE, and LICENSEE shall have the right at its sole expense to assume control of the preparation, filing, prosecution and maintenance of such patent application or patent. If LICENSEE no longer wishes to support the prosecution or maintenance of any patent or patent application covered by the PATENT RIGHTS, then LICENSEE shall provide written notice to UNIVERSITY, and LICENSEE shall not be responsible for such corresponding patent expenses that are incurred subsequent to the date of receipt by UNIVERSITY of such written notice by LICENSEE; such returned patent or patent application shall be excluded from the PATENT RIGHTS. LICENSEE shall notify UNIVERSITY immediately if, at any time during the term of this Agreement, LICENSEE or any of its sublicensees does not qualify as a “Small Entity” as provided by the United States Patent and Trademark Office.

6.2 All fees and costs including attorneys’ fees relating to the filing, prosecution and maintenance of the PATENT RIGHTS whether incurred prior to or after the EFFECTIVE DATE of this Agreement shall be the responsibility of LICENSEE. LICENSEE shall not be required to reimburse the UNIVERSITY for any fees under this section that have been paid to the UNIVERSITY by prior licensees or any other third party. Fees and costs shall be paid by LICENSEE within thirty (30) days after receipt of UNIVERSITY’S invoice therefore. Payments pursuant to this Section 6.2 are not creditable against royalties.

6.3 LICENSEE shall own any new patent application, and any patent that issues therefrom, or new technology in the SLE FIELD developed independently of the UNIVERSITY and UNIVERSITY employees and shall not owe the UNIVERSITY any fee or royalty under section 4 relating to such a new patent application, and any patent that issues therefrom, or new technology.

ARTICLE 7 -INFRINGEMENT ACTIONS

7.1 LICENSEE shall inform UNIVERSITY promptly in writing of any alleged infringement of the PATENT RIGHTS by a third party and of any available evidence thereof.

7.2 During the term of this Agreement, LICENSEE shall have the right, but shall not be obligated, to prosecute at its own expense all infringements of the PATENT RIGHTS in the Field if LICENSEE has notified UNIVERSITY in writing of its intent to prosecute. In furtherance of such right, UNIVERSITY hereby agrees that LICENSEE may include UNIVERSITY as a party plaintiff in any such suit, without expense to UNIVERSITY. [***].

7.3 If within six (6) months after having been notified of any alleged infringement, LICENSEE shall have been unsuccessful in persuading the alleged infringer to desist and shall not have brought and shall not be diligently prosecuting an infringement action, or if LICENSEE shall notify UNIVERSITY at any time prior thereto of its intention not to bring suit against any alleged infringer, then, and in those events only, UNIVERSITY shall have the right, but shall not be obligated, to prosecute at its own expense any infringement of the PATENT RIGHTS, and UNIVERSITY may, for such purposes, use the name of LICENSEE as party plaintiff. [***]

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[***]

7.4 In the event that a declaratory judgment action alleging invalidity or infringement of any of the PATENT RIGHTS shall be brought against UNIVERSITY, LICENSEE, at its option, shall have the right, within thirty (30) days after commencement of such action, to intervene and take over the sole defense of the action at its own expense.

7.5 In any infringement suit either party may institute to enforce the PATENT RIGHTS pursuant to this Agreement, the other party shall, at the request and expense of the party initiating such suit, cooperate in all respects and, to the extent possible, have its employees testify when requested and make available relevant records, papers, information, samples, specimens, and the like.

ARTICLE 8 -INDEMNIFICATION/INSURANCE/LIMITATION OF LIABILITY

8.1 LICENSEE shall at all times during the term of this Agreement and thereafter indemnify, defend and hold UNIVERSITY, its trustees, officers, faculty member, employees and Affiliates ("INDEMNIFIED PARTIES") harmless against all claims and expenses, including legal expenses and reasonable attorneys' fees, arising out of the death of or injury to any person or persons or out of any damage to property or the environment, and against any other claim, proceeding, demand, expense and liability of any kind whatsoever resulting from: (i) the production, manufacture, sale, use, lease, consumption or advertisement of the LICENSED TECHNOLOGY by Licensee to its sublicensees, (ii) the practice by LICENSEE or any Affiliate or sublicensee of the PATENT RIGHTS; or (iii) arising from or relating to this License Agreement. LICENSEE shall provide this defense and indemnity whether or not any INDEMNIFIED PARTIES, either jointly or severally, is named as a party defendant and whether or not any INDEMNIFIED PARTIES is alleged to be negligent or otherwise responsible for any injuries to person or property. The obligation of LICENSEE to defend and indemnify as set forth herein shall survive termination of this Agreement and shall not be limited by any other limitation of liability elsewhere in this Agreement.

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

8.2 LICENSEE shall obtain and carry in full force and effect liability insurance which shall protect LICENSEE and UNIVERSITY in regard to events covered by Section 8.1 above, as provided below:

	COVERAGE	LIMITS
(a)	Commercial General Liability, including, but not limited to, Products, Contractual, Fire, Legal and Personal Injury	$1,000,000 Combined Single Limits for Bodily Injury and Property Damage
(b)	Products Liability	$5,000,000

The UNIVERSITY of Pittsburgh is to be named as an additional insured with respect to insurance policies identified in Sections 8.2(a) and 8.2Cb) above. Certificates of insurance evidencing the coverage required above shall be filed with the UNIVERSITY'S Office of Technology Management, 200 Gardner Steel Conference Center, Pittsburgh, PA 15260, no later than fifteen (15) days after execution of this Agreement and annually thereafter. Such certificates shall provide that the insurer will give the UNIVERSITY not less than thirty (30) days advance written notice of any material changes in or cancellation of coverage.

8.3 UNIVERSITY, AND ITS AGENTS AND/OR EMPLOYEES, MAKE NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND VALIDITY OF PATENT RIGHTS CLAIMS, ISSUED OR PENDING. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS A REPRESENTATION OR WARRANTY THAT THE PRACTICE BY LICENSEE OF THE LICENSE GRANTED HEREUNDER SHALL NOT INFRINGE THE PATENT RIGHTS OF ANY THIRD PARTY. UNIVERSITY ADDITIONALLY DISCLAIMS ALL OBLIGATIONS AND LIABILITIES ON THE PART OF UNIVERSITY, ITS AGENTS AND/OR EMPLOYEES, FOR DAMAGES, INCLUDING, BUT NOT LIMITED TO, DIRECT,

INDIRECT, SPECIAL AND CONSEQUENTIAL DAMAGES, ATTORNEYS' AND EXPERTS' FEES, AND COURT COSTS (EVEN IF UNIVERSITY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, FEES OR COSTS), ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, INCLUDING THE MANUFACTURE, USE OR SALE OF THE PRODUCT(S) AND SERVICE(S) LICENSED UNDER THIS AGREEMENT. LICENSEE ASSUMES ALL RESPONSIBILITY AND LIABILITY FOR LOSS OR DAMAGE CAUSED BY A PRODUCT OR SERVICE THAT IS MANUFACTURED, USED OR SOLD BY LICENSEE (INCLUDING SUBLICENSEE SALES) WHICH IS LICENSED TECHNOLOGY HEREUNDER.

ARTICLE 9 - ASSIGNMENT

Except as expressly provided hereunder, this Agreement is not assignable without the prior written consent of UNIVERSITY which consent shall not be unreasonably withheld, and any attempt to do so shall be null and void, provided that LICENSEE may assign this Agreement and its rights and obligations thereunder, without the UNIVERSITY'S prior written consent in connection with the transfer or sale of all or substantially all of the LICENSEE'S business relating to the PATENT RIGHTS and LICENSED TECHNOLOGY to a third party, whether by merger, sale of stock, sale of assets or otherwise subject to LICENSEE providing at least 10 business days written notification to UNIVERSITY and further subject to the assignee agreeing writing to be bound to all the terms and conditions of this License. The rights and obligations of the parties under this Agreement shall be binding upon and inure to the benefit of the successors and permitted assigns of the parties. Any assignment not in accordance with this Article 9 shall be null and void.

ARTICLE 10 - TERMINATION

10.1 This Agreement shall terminate upon the expiration of the last surviving claim of the PATENT RIGHTS.

10.2 UNIVERSITY shall have the right to terminate this Agreement if:

(a) LICENSEE shall default in the performance of any of the obligations herein contained and such default has not been cured within [***] days after receiving written notice thereof from UNIVERSITY; or

(b) LICENSEE shall cease to carry out its business, become bankrupt or insolvent, apply for or consent to the appointment of a trustee, receiver or liquidator of its assets or seek relief under any law for the aid of debtors.

10.3 LICENSEE may terminate this Agreement upon six (6) months prior written notice to UNIVERSITY and payment of all amounts due UNIVERSITY through the effective date of termination, including patent cost reimbursement pursuant to Article 6 hereof.

10.4 Upon termination of this Agreement, neither party shall be released from any obligation that matured prior to the effective date of such termination. LICENSEE and any sublicensee may, however, after the effective date of such termination, sell all products under the LICENSED TECHNOLOGY which LICENSEE produced prior to the effective date of such termination, provided that LICENSEE shall pay to UNIVERSITY the royalties thereon as required by Article 4 hereof and submit the reports required by Article 5 hereof.

ARTICLE 11 - NOTICES

11.1 Any notice or communication pursuant to this Agreement shall be sufficiently made or given if sent by certified or registered mail, postage prepaid, or by overnight courier, with proof of delivery by receipt, addressed to the address below or as either party shall designate by written notice to the other party.

In the case of UNIVERSITY:

Director
Office of Technology Management
University of Pittsburgh
200 Gardner Steel Conference Center
Thackeray & O'Hara Streets
Pittsburgh, PA 15260

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In the case of LICENSEE:

Exagen Diagnostics, Inc.
801 University Blvd SE
Suite 103
Albuquerque, NM 87106
Attn: President

11.2 Any payments to UNIVERSITY hereunder by wire transfer shall be directed as follows:

Bank: Mellon Bank, NA, Pittsburgh, PA
ABA Routing No.: 043000261-UNIVERSITY of Pittsburgh
Account No.: 0015510
Mellon SWIFT Code: MELNUS3P (international transfers)
Reference Code: Office of Technology Management

ARTICLE 12 - AMENDMENT, MODIFICATION

12.1 This Agreement may not be amended or modified except by the execution of a written instrument signed by the parties hereto.

ARTICLE 13 - MISCELLANEOUS

13.1 This Agreement shall be construed and interpreted in accordance with the laws of the Commonwealth of Pennsylvania. The forum for any action relating to this Agreement, including those brought against individuals, such as University employees or agents, shall be the Courts of Allegheny County, Pennsylvania, or, if in a federal proceeding, the United States District Court for the Western District of Pennsylvania.

13.2 The parties acknowledge that this Agreement sets forth the entire understanding and intentions of the parties hereto as to the subject matter hereof and supersedes all previous representations, negotiations, or understandings between the parties and/or its employees or agents, whether written or oral, regarding the subject matter of this Agreement.

13.3 Nothing contained in this Agreement shall be construed as conferring upon either party any right to use in advertising, publicity or other promotional activities any name, trade name, trademark, or other designation of the other party, including any contraction, abbreviation, or simulation of any of the foregoing. Without the express written approval of the other party, neither party shall use any designation of the other party in any

promotional activity associated with this Agreement or the LICENSED TECHNOLOGY. Neither party shall issue any press release or make any public statement in regard to this Agreement without the prior written approval of the other party, except LICENSEE may make such disclosures as are necessary or appropriate to comply with its obligations under applicable laws, rules and regulations of the Securities and Exchange Commission and securities exchange upon which LICENSEE'S securities are listed.

13.4 If one or more of the provisions of this Agreement shall be held invalid, illegal or unenforceable, the remaining provisions shall not in any way be affected or impaired thereby. In the event any provision is held illegal or unenforceable, the parties shall use reasonable efforts to substitute a valid, legal and enforceable provision which, insofar as is practical, implements purposes of the provision held invalid, illegal or unenforceable.

13.5 Failure at any time to require performance of any of the provisions herein shall not waive or diminish a party's right thereafter to demand compliance therewith or with any other provision. Waiver of any default shall not waive any other default. A party shall not be deemed to have waived any rights hereunder unless such waiver is in writing and signed by a duly authorized officer of the party making such waiver.

13.6 LICENSEE acknowledges that UNIVERSITY is free to publish the results of the research activities of its faculty, staff and students, even though such publication may involve the PATENT RIGHTS or LICENSED TECHNOLOGY. UNIVERSITY agrees to submit to LICENSEE any proposed publication or presentation regarding the subject matter specifically described in the PATENT RIGHTS for prior review by LICENSEE at least [***] days before its submittal for publication or its presentation. LICENSEE may, within [***] days after receipt of such proposed publication, request that such proposed publication be delayed not more than [***] days in order to allow for protection of intellectual property rights.

13.7 The term "Confidential Information" shall mean any and all proprietary or confidential information of UNIVERSITY or LICENSEE which may be exchanged between parties at any time and from time to time during the term of this Agreement. Information shall not be considered confidential to the extent that either party can establish by competent proof

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that it: (i) is publically disclosed through no fault of any party hereto, either before or after it becomes known to the receiving party; (ii) was known to the receiving party prior to the date of this Agreement, which knowledge was acquired independently and not from another party hereto (or such party's employees); (iii) is subsequently disclosed to the receiving party in good faith by a third party who has a right to make such disclosure; or (iv) has been published by a third party as a matter of right. The parties agree that during the term of this Agreement, and for a period of [***] years after this Agreement terminates, a party receiving Confidential Information of the other party will (a) maintain in confidence such Confidential Information; (b) not disclose such Confidential Information to any third party and (c) not use such confidential Information for any purpose except those permitted in this Agreement. Notwithstanding the foregoing, if a party is required by law, regulation or court order to disclose Confidential Information of the other party, the party required to make such disclosure shall limit the same to the minimum required to make such disclosure shall limit the same to the minimum required to comply with the law or court order, and shall use reasonable efforts to attempt to seek confidential treatment for that disclosure, and prior to making such disclosure that party shall notify the other party shall notify the other party, not later than ten (10) days (or shorter period of time as may be practicable under the circumstances) before the disclosure in order to allow that other party to comment and/or to obtain protective or other order, including extensions of time and the like, with respect to such disclosure. In addition, a party may disclose Confidential Information to the other party to employees, to sublicensees and potential sublicensees (in the case of LICENSEE), or to other third parties in connection with due diligence or similar investigations by third parties or potential third party investors in confidential financing document, provided, in each case, that any such employee, consultant, agent, sublicense, potential sublicense or other third party agrees in writing to be bound by terms of confidentiality and non-use at least as stringent as those set forth in this Section 13.7.

13.8 The parties acknowledge that they consulted, or had the opportunity to investigate and/or consult with their legal counsel and/or other advisors with respect to the PATENT RIGHTS, LICENSED TECHNOLOGY, and the terms of this Agreement.

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13.9 The parties agree that this Agreement constitutes an arm's length business transaction and does not create a fiduciary relationship.

13.10 LICENSEE agrees that with respect to the performance of this Agreement or the practice of the rights granted by the UNIVERSITY hereunder, it shall comply with any and all applicable United States export control laws and regulations, as well as any and all embargoes and/or other restrictions imposed by the Treasury Department's Office of Foreign Asset Controls.

13.11 If LICENSEE challenges the validity or enforceability of UNIVERSITY'S PATENT RIGHTS or UNIVERSITY'S ownership of the PATENT RIGHTS anywhere in the world, the LICENSEE shall continue to pay to UNIVERSITY all royalties and other financial obligations required under this Agreement, to include patent costs and fees. If any such challenge is unsuccessful by LICENSEE, the royalty rates and any non-royalty sublicense income rate set forth in Article 4.1 above shall automatically double in value, to include all royalty minimums and floors; and LICENSEE shall reimburse UNIVERSITY for all fees and costs associated with defending such action, to include attorneys' and expert fees. The effective date of such increase in royalty rates shall be the date of the first court order declaring any claim of the PATENT RIGHTS as valid or enforceable.

IN WITNESS WHEREOF, the parties have set their hands and seals as of the date set forth on the first page hereof.

UNIVERSITY OF PITTSBURGH - OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION

By /s/ Jerome Cochran
Jerome Cochran
Executive Vice Chancellor

EXAGEN DIAGNOSTICS, INC.

By /s/ Scott L. Glenn
Scott L. Glenn
President/CEO

EXHIBIT A
PATENT RIGHTS

University Case Number	Patent Title	Country	Application Number	Filing Date	Patent Number	Issue Date	Status
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
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EXHIBIT B
EXCLUDED PATENT RIGHTS

University Case Number	Patent Title	Country	Application Number	Filing Date	Patent Number	Issue Date	Status
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
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CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

FIRST AMENDMENT TO AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT

This FIRST AMENDMENT TO AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT (this "First Amendment") is made as of the 17th day of May, 2012, by and between the University of Pittsburgh – Of the Commonwealth System of Higher Education, a non-profit corporation organized and existing under the laws of the Commonwealth of Pennsylvania ("University") and Exagen Diagnostics, Inc., a corporation existing under the laws of Delaware ("Licensee").

WHEREAS, University and Licensee have previously entered into an Amended and Restated Exclusive License Agreement dated as of August 2, 2011 (the "Agreement"); and

WHEREAS, the parties wish to amend the Agreement as set forth herein.

NOW, THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt and sufficiency which are hereby acknowledged, the parties hereby agree as follows:

1. Amendments.

(a) Section 1.10 of the Agreement is hereby deleted and replaced in its entirety as follows:

"'TERRITORY' shall mean the United States."

(b) Section 3.2(b) of the Agreement is hereby deleted and replaced in its entirety as follows:

"Within forty eight (48) months from the Effective Date of this Agreement, begin clinical trials for monitoring claims."

(c) Section 3.2(c) of the Agreement is hereby deleted.

(d) Section 4.3 of the Agreement is hereby deleted and replaced in its entirety as follows:

"All payments pursuant to this Agreement may be made by check or by wire transfer (along with applicable wire transfer, transaction, and/or foreign translation fees) in United States dollars without deduction or exchange, collection or other charges and directed to the address or, in the case of wire transfer, to the bank, set forth in Article 11. Annual maintenance payments pursuant to Section 4.1(a) hereof shall be paid on the anniversary of the EFFECTIVE DATE of the calendar year in which they are due. Royalty payments pursuant to Section 4.1(b) hereof shall be due within sixty (60) days after each March 31, June 30, September 30 and December 31. The minimum annual royalty for any calendar year pursuant to Section 4.1(c) shall be paid by January 30 of the

subsequent calendar year. NON-ROYALTY SUBLICENSE INCOME payments pursuant to Section 4.1(e) hereof shall be paid within thirty (30) days after receipt of payment by LICENSEE from sublicense. Payments under Section 4.1(b) are payable on a country by country basis only in those countries in which there are PATENT RIGHTS with respect to the applicable LICENSED TECHNOLOGY."

(e) Section 8.2 of the Agreement is hereby deleted and replaced in its entirety as follows:

"LICENSEE shall obtain and carry in full force and effect liability insurance which shall protect LICENSEE and UNIVERSITY in regard to events covered by Section 8.1 above, as provided below:

COVERAGE	**LIMITS**
(a) Commercial General Liability, including, but not limited to, Products, Contractual, Fire, Legal and Personal Injury	$1,000,000 Combined Single Limits for Bodily Injury and Property Damage
(b) Professional Liability	$5,000,000
(c) Products Liability	$5,000,000, to be effective on or before the date of first sale of LICENSED TECHNOLOGY products.

The UNIVERSITY of Pittsburgh is to be named as an additional insured with respect to insurance policies identified in Sections 8.2(a), 8.2(b), and 8.2(c) above. Certificates of insurance evidencing the coverage required above shall be filed with the UNIVERSITY'S Office of Technology Management, 200 Gardner Steel Conference Center, Pittsburgh, PA 15260, no later than fifteen (15) days after execution of this Agreement and annually thereafter. Such certificates shall provide that the insurer will give the UNIVERSITY not Jess than thirty (30) days advance written notice of any material changes in or cancellation of coverage."

(f) Exhibit A and Exhibit B are hereby deleted and replaced with the revised Exhibit A and Exhibit B appended hereto.

2. Miscellaneous.

(a) Except as specifically amended above, all terms of the Agreement shall remain in full force and effect. To the extent that there are any inconsistencies between the terms of the Agreement and the terms of this First Amendment, the terms of this First Amendment shall prevail in effect.

(b) The parties acknowledge that this First Amendment and the Agreement set forth the entire understanding and intentions of the parties hereto as to the subject matter hereof and supersedes all previous understandings between the parties, written or oral, regarding such subject matter.

IN WITNESS WHEREOF, the parties have executed this First Amendment as of the date first written above.

UNIVERSITY OF PITTSBURGH – OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION

By /s/ Jerome Cochran
Name: Jerome Cochran
Title: Executive Vice Chancellor

EXAGEN DIAGNOSTICS, INC.

By /s/ Ron Rocca
Name: Ron Rocca
Title: CEO

EXHIBIT A

PATENT RIGHTS FOR EXCLUSIVE LICENSE AGREEMENT BETWEEN UNIVERSITY OF PITTSBURGH AND EXAGEN DIAGNOSTICS, INC.

University Case Number	Patent Title	Country	Application Number	Filing Date	Patent Number	Issue Date	Status
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]	[***]	[***]
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EXHIBIT B

EXCLUDED PATENT RIGHTS FOR EXCLUSIVE LICENSE AGREEMENT BETWEEN UNIVERSITY OF PITTSBURGH AND EXAGEN DIAGNOSTICS, INC.

University Case Number	Patent Title	Country	Application Number	Filing Date	Patent Number	Issue Date	Status
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CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

SECOND AMENDMENT TO AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT

This SECOND AMENDMENT TO AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT (this "Second Amendment") is made as of the 30th day of September, 2013, by and between the University of Pittsburgh – Of the Commonwealth System of Higher Education, a non-profit corporation organized and existing under the laws of the Commonwealth of Pennsylvania ("University") and Exagen Diagnostics, Inc., a corporation existing under the laws of Delaware ("Licensee").

WHEREAS, University and Licensee have previously entered into an Amended and Restated Exclusive License Agreement dated as of August 2, 2011 (the "Agreement") and a First Amendment to Amended and Restated Exclusive License dated as of May 17, 2012 (the "First Amendment"); and

WHEREAS, the parties wish to amend the Agreement as set forth herein.

NOW, THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt and sufficiency which are hereby acknowledged, the parties hereby agree as follows:

1. In consideration of the rights, privileges and license granted by the University hereunder, Licensee shall pay a fee in connection with this Second Amendment in the amount of [***] which shall be non-refundable and non-creditable against royalties or any other payments, and which shall be due immediately upon execution of this Second Amendment.

2. Amendments.

   (a) Article 1.7 of the Agreement is hereby deleted and replaced in its entirety as follows:

   "1.7 "PATENT RIGHTS" shall mean UNIVERSITY intellectual property described below and assigned to the UNIVERSITY:

   (a) The United States patents and/or patent applications listed in Exhibit A;

   (b) United States patents issued from the applications listed in Exhibit A and from divisionals and continuations and continuations in part of these applications; and

   (c) Claims of U.S. continuation in part and divisional applications, and of the resulting patents, which are directed to subject matter specifically described in the U.S. applications listed in Exhibit A."

   (b) A new Article 1.11 is added to the Agreement:

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

"1.11 "MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD" shall mean any and all applications of the Patent Rights in Monitoring of Organ Transplantation & Organ Rejection."

(c) Article 1.4(b) is hereby deleted and replaced in its entirety as follows:

"1.4(b) Manufactured by using a process or is employed to practice a process which is covered in whole or in part by an issued, unexpired claim or a pending claim contained in the PATENT RIGHTS in the country in which any such process in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD is used or in which such product or part thereof or service is used or sold."

(d) Article 2.1 is hereby deleted and replaced in its entirety as follows:

"2.1 Subject to the terms and conditions of this Agreement, University hereby grants to LICENSEE, to the extent it may lawfully do so, the right and exclusive license in the TERRITORY to make, have made, use, offer for sale, import and sell the LICENSED TECHNOLOGY in the SLE FIELD and the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD and to practice under the PATENT RIGHTS in the SLE FIELD and the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD to the end of the term for which the PATENT RIGHTS are granted, unless this Agreement is terminated as provided herein. UNIVERSITY reserves the royalty-free, nonexclusive right to practice under the PATENT RIGHTS for NON-COMMERCIAL EDUCATION AND RESEARCH PURPOSES and to use the LICENSED TECHNOLOGY for NON-COMMERCIAL EDUCATION AND RESEARCH PURPOSES."

(e) A new Article 3.4 is added to the Agreement:

"3.4. In addition, LICENSEE shall adhere to the following milestone in the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD: Within sixty (60) months from the Effective Date of this Agreement, begin a clinical trial for monitoring of organ transplantation and/or organ rejection claims."

(f) A new Article 3.5 is added to the Agreement:

"LICENSEE's failure to fulfill on a timely basis the milestone set forth in Section 3.4 hereof shall be grounds for UNIVERSITY to terminate this Agreement pursuant to Section 10.2(a); except that for a single time, if the milestone in Section 3.4 has not been completed within the time frame

allotted through no fault of LICENSEE and following the best efforts of LICENSEE to meet such milestone, LICENSEE may, on a one-time basis, notify the UNIVERSITY in writing that it desires a single six (6) month extension to meet such milestone and LICENSEE shall be deemed to have fulfilled the milestone requirement if LICENSEE makes a penalty payment of [***] dollars ($[***]) with both notice and penalty payment to be received by the UNIVERSITY within ten days of the applicable milestone achievement date. In such case the LICENSEE and UNIVERSITY shall negotiate a new time for attainment of such missed milestone (not to exceed six months) and subsequent timeframes relying upon the meeting of previous milestones may also be adjusted. Failure by LICENSEE to make the penalty payment or failure to achieve the milestone by the revised milestone date shall result in the FIELD of this Agreement to be automatically amended to remove the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD, and University shall be free to license the removed indication either exclusively or non-exclusively to any third party regardless of whether LICENSEE and UNIVERSITY execute a confirmatory Amendment to this Agreement to this effect. For the avoidance of doubt, in the event the previous sentence is triggered, LICENSEE'S exclusive rights in the SLE FIELD shall not be affected.

(g) Article 4.2 is hereby deleted and replaced in its entirety as follows:

"4.2. In the event that it should prove necessary for LICENSEE to license intellectual property rights owned by a third party in order to practice the LICENSED TECHNOLOGY in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD in order to avoid infringing the patent or other intellectual property rights of such third party, then LICENSEE shall be entitled to a credit of such third party royalties against royalties due to UNIVERSITY under Section 4.1(b), and Section 4.1(c), provided that (i) in no event shall the royalty rate applicable to NET SALES in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD be less than [***] percent ([***]%) and (ii) in no event shall the royalty rate applicable to NET SALES in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD from a sub-Licensee be less than [***] percent ([***]%)."

(h) Article 6.3 is hereby deleted and replaced in its entirety as follows:

"6.3. LICENSEE shall own any new patent application, and any patent that issues therefrom, or new technology in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD developed independently of the UNIVERSITY and UNIVERSITY employees and shall not owe the UNIVERSITY any fee or

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royalty under section 4 relating to such a new patent application, and any patent that issues therefrom, or new technology."

(i) Article 7.2 is hereby deleted and replaced in its entirety as follows:

"During the term of this Agreement, LICENSEE shall have the right, but shall not be obligated, to prosecute at its own expense all infringements of the PATENT RIGHTS in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD if LICENSEE has notified UNIVERSITY in writing of its intent to prosecute. In furtherance of such right, UNIVERSITY hereby agrees that LICENSEE may include UNIVERSITY as a party plaintiff in any such suit, without expense to UNIVERSITY. [***]"

(j) Exhibit A of the Agreement is deleted and replaced with the attached Exhibit A.

(k) Exhibit B of the Agreement is hereby deleted.

2. Miscellaneous.

(a) Except as specifically amended above, all terms of the Agreement, as amended by the First Amendment, shall remain in full force and effect. To the extent that there are any inconsistencies between the terms of the Agreement, the First Amendment, and/or the terms of this Second Amendment, the terms of this Second Amendment shall prevail in effect.

(b) The parties acknowledge that this Second Amendment and the Agreement, as previously amended, set forth the entire understanding and intentions of the parties hereto as to the subject matter hereof and supersedes all previous understandings between the parties, written or oral, regarding such subject matter.

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*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, the parties have executed this Second Amendment as of the date first written above.

UNIVERSITY OF PITTSBURGH – OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION

By /s/ Jerome Cochran
Name: Jerome Cochran
Title: Executive Vice Chancellor

LICENSEE

By /s/ Ron Rocca
Name: Ron Rocca
Title: Chief Executive Officer

EXHIBIT A

PATENT RIGHTS FOR SECOND AMENDMENT TO AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT BETWEEN THE UNIVERSITY OF PITTSBURGH AND EXAGEN DIAGNOSTICS

Univ. Case No.	Application No.	Application Filing Date	Patent No.	Patent Issuance Date	Title	Country
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THIRD AMENDMENT TO AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT

This THIRD AMENDMENT TO AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT (this "Third Amendment") is made as of the 24th day of June, 2016, by and between the University of Pittsburgh – Of the Commonwealth System of Higher Education, a non-profit corporation organized and existing under the laws of the Commonwealth of Pennsylvania ("University") and Exagen Diagnostics, Inc., a corporation existing under the laws of Delaware ("Licensee"),

WHEREAS, University and Licensee have previously entered into an Amended and Restated Exclusive License Agreement dated as of August 2, 2011, as amended by the First Amendment to Amended and Restated License Agreement dated May 17, 2012 and the Second Amendment to Amended and Restated License Agreement dated September 30, 2013 (the "Agreement"); and

WHEREAS, the parties wish to amend the Agreement as set forth herein.

NOW, THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt and sufficiency which are hereby acknowledged, the parties hereby agree as follows:

1. Consideration. University and Licensee agree that in consideration for amending the Agreement, and settling all royalty obligations of Licensee for the three years ending December 31, 2014, including the costs incurred by University in connection with the audit of the three years ending December 31, 2014, Licensee will pay University the amount of $111,000, which shall be due immediately upon Licensee's execution of this Third Amendment. Licensee shall not be otherwise liable or responsible for any obligation or expense accruing from, arising from or relating to goods or services sold or performed after January 1, 2012 through December 31, 2014.

2. Amendments.

   (a) Section 1.4 of the Agreement is hereby deleted and replaced in its entirety as follows:

   "LICENSED TECHNOLOGY' shall mean any product or part thereof or service which is:

   (a) Covered by a VALID PATENT CLAIM in the country in which any such product or part thereof is made, used or sold or in which any such service is used or sold; or

   (b) Manufactured by using a process or is employed to practice a process which is covered by a VALID PATENT CLAIM in the country in which any such process is used or in which such product is made.

In the case of a COMBINATION PRODUCT, if the LICENSED TECHNOLOGY is used in combination with other markers not covered by the LICENSED TECHNOLOGY in an algorithm or formula to produce a single test result, the combination of the LICENSED TECHNOLOGY and the markers not covered by the LICENSED TECHNOLOGY will be considered LICENSED TECHNOLOGY for the purposes of determining royalty obligations. For example, when test results from LICENSED TECHNOLOGY along with the test results from non-licensed markers are input together into an algorithm or formula which produces a single test result, NET SALES will include all markers used in combination to produce the single test result. When results from non-licensed markers are reported alongside results from LICENSED TECHNOLOGY but which are not used in combination with LICENSED TECHNOLOGY to produce a single test result, the non-licensed markers will not be considered LICENSED TECHNOLOGY for the purposes of determining royalty obligations hereunder, and no royalty will be due on sales of such non-licensed markers. By way of example using specific product offerings, the cash receipts associated with the entire Avise Lupus LICENSED TECHNOLOGY product will be subject to the applicable royalty rate in Article 4, whereas the Avise CTD LICENSED TECHNOLOGY shall be treated as a COMBINATION PRODUCT under sections 1.4, 1.8 and 1.12 herein. For avoidance of doubt, a test report may contain one or more test results, some of which may utilize LICENSED TECHNOLOGY and some of which may not."

(b) Section 1.8 of the Agreement is hereby deleted and replaced in its entirety as follows:

"'NET SALES' shall mean, with respect to a particular time period, the total cash amounts collected during such time period by LICENSEE or its Sublicensee for LICENSED TECHNOLOGY and services or testing using the LICENSED TECHNOLOGY, less deductions for refunds or rebates of previously collected amounts where factually applicable.

In the event a Licensed Technology is sold in the form of a COMBINATION PRODUCT, the NET SALES for such COMBINATION PRODUCT shall be calculated by multiplying the actual NET SALES of such Combination Product by the fraction A/(A+B), where A is the published Medicare allowable rate at the end of the reported quarter for the LICENSED TECHNOLOGY, and B is the published Medicare allowable rate at the end of the reported quarter for all other components or products in the COMBINATION PRODUCT. In any event the fraction applied to the NET SALES of a COMBINATION PRODUCT using the LICENSED TECHNOLOGY shall never be less than 33%. If the Licensed Technology and/or the other components or products do not correspond with Medicare allowable rates, NET SALES for the COMBINATION PRODUCT shall be

determined by the parties in good faith and such agreement shall be reduced to writing by both parties.''

In the initial reporting quarter following the effective date of this Third Amendment, the Licensee will recalculate Net Sales utilizing the definition provided in this Third Amendment from January 1, 2016 through the end of the initial reporting quarter and then offset this year-to-date Net Sales figure with any royalties paid for reporting periods since January 1, 2016.

For clarification, the University and the Licensee intend to transition, effective January 1, 2016, from the definition of Net Sales under the Agreement to the definition of Net Sales provided under this Third Amendment without paying royalties on the same NET SALES twice. The University recognizes that cash collected will continue to be segmented between cash collected for tests with reporting dates before and after January 1, 2016. Royalties will be paid on only cash collected for tests with reporting dates after January l, 2016. Revenues payable on tests with reporting dates before January 1, 2016 were estimated and the associated royalties paid based on those estimates, as subject to Section 2 below.

(c) A new Section 1.12 is hereby added to the Agreement and shall read as follows:

"'COMBINATION PRODUCT' shall mean a product that includes at least one additional marker that is not covered by the LICENSED TECHNOLOGY."

(d) A new Section 1.13 is hereby added to the Agreement and shall read as follows:

"'VALID PATENT CLAIM' shall mean a claim of (a) an issued and unexpired patent included within the Patent Rights which has not been held unenforceable or invalid by a final, unreversed, and unappealable decision of a court or other governmental body of competent jurisdiction, has been irretrievably abandoned or disclaimed, or has otherwise been finally admitted or finally determined by the relevant governmental authority to be invalid, unpatentable or unenforceable, whether through reissue, reexamination, disclaimer or otherwise; or (b) a pending patent application within the Patent Rights to the extent the claim continues to be prosecuted in good faith."

(e) Section 5.1 of the Agreement is hereby deleted and replaced in its entirety as follows:

''Within sixty (60) days after each March 31, June 30, September 30 and December 31 of each year during the term of this Agreement beginning in the year of the first commercial sale of LICENSED TECHNOLOGY,

LICENSEE shall deliver to UNIVERSITY true, accurate and detailed reports of:

(a) Number of product and service NET SALES, each stated-separately, for LICENSEE and all sublicensees;

(b) Total billings and receivables for all such products and services;

(c) Deductions set forth in Section 1.8, each stated separately, and the basis for any COMBINATION PRODUCT calculation as set forth in Section 1.8, including the applicable Medical allowable rates used as the basis for the COMBINATION PRODUCT calculations;

(d) Total royalties due;

(e) Name and addresses of sublicensees; and

(f) Total NON-ROYALTY SUBLICENSE INCOME received during such calendar quartet and total amount of payment due pursuant to Section 4.1 (e)."

(f) Section 11.1 of the Agreement is hereby deleted and replaced in its entirety as follows:

"Any notice or communication pursuant to this Agreement shall be sufficiently made or given if sent by certified or registered mail, postage prepaid, or by overnight courier, with proof of delivery by receipt, addressed to the address below or as either party shall designate by written notice to the other party.

In the case of UNIVERSITY:

Associate Vice Chancellor for Technology Management
and Commercialization
Office of Technology Management
University of Pittsburgh
200 Gardner Steel Conference Center
Thackeray &, O'Hara Streets
Pittsburgh, PA 1526

In the case of LICENSEE:

Exagen Diagnostics, Inc.
1261 Liberty Way, Suite C
Vista, CA 92081"

3. Audit. University agrees that if any audit is initiated that includes an audit of the calendar year ending December 31, 2015, the definition of COMBINATION PRODUCT as contemplated under this Third Amendment will be used to determine the royalty obligations of Licensee for that calendar year.

4. Miscellaneous.

(a) Except as specifically amended above, all terms of the Agreement, as amended by this Third Amendment, shall remain in full force and effect. To the extent that there are any inconsistencies between the terms of the Agreement and the terms of this Third Amendment, the terms of this Third Amendment shall prevail in effect.

(b) The parties acknowledge that this Third Amendment and the Agreement set forth the entire understanding and intentions of the parties hereto as to the subject matter hereof and supersede all previous understandings between the parties, written or oral, regarding such subject matter.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties have executed this Third Amendment as of the date first written above.

UNIVERSITY OF PITTSBURGH — OF
THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION

By 
Marc S. Malandro, Ph.D., CLP, RTTP
Associate Vice Chancellor for Technology Management and Commercialization

Reviewed and approved by OGC
University of Pittsburgh

By: 
Date: 6/27/16

EXAGEN DIAGNOSTICS, INC.

By 
Name: Fortunato Ron Rocca
Title: CEO

Exhibit 10.21

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

EXCLUSIVE LICENSE AGREEMENT

This Agreement is made and entered into as of the 30th day of September, 2013 ("Effective Date"), by and between the University of Pittsburgh – Of the Commonwealth System of Higher Education, a non-profit corporation organized and existing under the laws of the Commonwealth of Pennsylvania, with an office at 200 Gardner Steel Conference Center, Thackeray and O'Hara Streets, Pittsburgh, Pennsylvania 15260 ("University"), and EXAGEN DIAGNOSTICS, INC., a corporation organized and existing under the laws of Delaware, having an office at 800 Bradbury Drive SE Suite 108, Albuquerque, NM 87106 ("Licensee").

WHEREAS, UNIVERSITY is the owner by assignment from the inventors of certain PATENT RIGHTS, entitled "Diagnosis and Monitoring of Systemic Lupus Erythematosus," developed by Drs. Susan Manzi and Joseph Ahearn of the UNIVERSITY faculty, consisting of certain patents and patent applications, and the UNIVERSITY has the right to grant licenses under such PATENT RIGHTS;

WHEREAS, the parties have previously entered into a United States-restricted Amended and Restated License Agreement with respect to the PATENT RIGHTS, effective August 2, 2011 and amended on May 17, 2012, and whereas the parties are contemporaneously entering into a Second Amendment To the Amended and Restated License Agreement with respect to the PATENT RIGHTS;

WHEREAS, University desires to have the PATENT RIGHTS utilized worldwide in the public interest;

WHEREAS, LICENSEE has represented to UNIVERSITY, to induce UNIVERSITY to enter into this Agreement, that LICENSEE is experienced in the development, production, manufacture, marketing and sale of products and/or the use of similar products to the LICENSED TECHNOLOGY and that LICENSEE shall commit itself to a thorough, vigorous and diligent program of exploiting the PATENT RIGHTS so that public utilization results therefrom; and

WHEREAS, Licensee desires to obtain a license under the non-US PATENT RIGHTS upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto, intending to be legally bound, agree as follows:

ARTICLE 1 – DEFINITIONS

For purposes of this Agreement, the following words and phrases shall have the following meanings:

1.1 "AFFILIATE" shall mean, with respect to the UNIVERSITY, any clinical or research entity that is operated or managed as a facility under the UPMC Health System, whether or not owned by UNIVERSITY.

1.2 "COMMERCIALLY REASONABLE BEST EFFORTS" shall mean, with respect to the research, development and commercialization of any product, compound or process, the level of efforts and resources used by [***].

1.3 "LICENSEE" shall mean Exagen Diagnostics, Inc. and all entities at least fifty percent (50%) owned or controlled by Exagen Diagnostics, Inc.

1.4 "LICENSED TECHNOLOGY" shall mean any product or part thereof or service which is:

(a) Covered in whole or in part by an issued, unexpired or pending claim contained in the PATENT RIGHTS in the country in which any such product or part thereof is made, used or sold or in which any such service is used or sold; or

(b) Manufactured by using a process or is employed to practice a process which is covered in whole or in part by an issued, unexpired claim or a pending claim contained in the PATENT RIGHTS in the country in which any such process that is included in the SLE FIELD or the MONITORING OF ORGAN

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TRANSPLANTATION & ORGAN REJECTION FIELD is used or in which such product or part thereof or service is used or sold.

1.5 "NON-COMMERCIAL EDUCATION AND RESEARCH PURPOSES" shall mean use of PATENT RIGHTS (including distribution of biological materials covered by the PATENT RIGHTS) for academic research or other not-for-profit scholarly purposes which are undertaken at a nonprofit or governmental institution that does not use the PATENT RIGHTS in the production or manufacture of products for sale or the performance of services for a fee.

1.6 "NON-ROYALTY SUBLICENSE INCOME" shall mean [***] pursuant to any sublicense granted pursuant to Section 2.3 hereunder, provided however, that NON ROYALTY SUBLICENSE INCOME does not include [***].

1.7 "PATENT RIGHTS" shall mean UNIVERSITY intellectual property described below and assigned to the UNIVERSITY:

(a) The foreign patents and/or patent applications listed in Exhibit A;

(b) Foreign patents issued from the applications listed in Exhibit A and from divisionals and continuations and continuations in part of these applications; and

(c) Claims of foreign continuation in part and divisional applications, and of the resulting patents, which are directed to subject matter specifically described in the foreign applications listed in Exhibit A.

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1.8 "NET SALES" shall mean gross invoice price actually charged by LICENSEE or its Sublicensee to third parties for LICENSED TECHNOLOGY and services or testing using the LICENSED TECHNOLOGY and services, less the following deductions where they are factually applicable and are not already reflected in the gross invoice price:

(a) Actual cost of freight, shipping and insurance charges or freight absorption, separately stated in such invoice;

(b) Actual trade, quantity or cash discounts actually allowed, to include discounts to managed care organizations, so long as such discounts: (i) are in amounts customary in the trade, and (ii) do not violate federal state laws or regulations;

(c) Actual credits and allowances granted for product returns, rejection for damages and recalls;

(d) Rebates paid or credited to managed care organizations and governmental agencies with respect to Medicaid, Medicare or similar state and federal government programs; and

(e) Sales taxes, tariff duties and/or use taxes actually paid and separately stated on each invoice.

1.9 "SLE FIELD" shall mean any and all applications of the Patent Rights in Systemic Lupus Erythematosus.

1.10 "TERRITORY" shall mean worldwide, with the exception of the United States.

1.11 "MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD" shall mean any and all applications of the Patent Rights in Monitoring of Organ Transplantation & Organ Rejection.

ARTICLE 2 – GRANT

2.1 Subject to the terms and conditions of this Agreement, UNIVERSITY hereby grants to LICENSEE, to the extent it may lawfully do so, the right and exclusive license in the

TERRITORY to make, have made, use, offer for sale, import and sell the LICENSED TECHNOLOGY in the SLE FIELD and the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD and to practice under the PATENT RIGHTS in the SLE FIELD and the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD to the end of the term for which the PATENT RIGHTS are granted, unless this Agreement is terminated as provided herein. UNIVERSITY reserves the royalty-free, nonexclusive right to practice under the PATENT RIGHTS for NON-COMMERCIAL EDUCATION AND RESEARCH PURPOSES and to use the LICENSED TECHNOLOGY for NON-COMMERCIAL EDUCATION AND RESEARCH PURPOSES.

2.2 The license granted hereby is subject to the rights of the United States government, if any, as set forth in 35 U.S.C. §200, et seq. Pursuant to this law, the United States government may have acquired a nonexclusive, nontransferable, paid up license to practice or have practiced for or on behalf of the United States the inventions described in the PATENT RIGHTS throughout the world. Pursuant to 35 U.S.C. §200, et seq. LICENSED TECHNOLOGY produced for sale in the United States shall be substantially manufactured in the United States (unless a waiver under 35 U.S.C. §204 is granted by the appropriate United States government agencies).

2.3 LICENSEE shall have the right to enter into sublicensing arrangements (without the right to further sublicense) for the rights, privileges and licenses granted hereunder. Prior written approval of each sublicensee by UNIVERSITY, which approval shall not be unreasonably withheld or delayed, will be required for all sublicensees except in such cases where the sublicensee: (1) has at least one FDA approved medical diagnostic test currently on the market: and (2) has yearly revenues from the commercial sale of diagnostic products in excess of [***] dollars ($[***]). Upon termination of this Agreement, rights of any sublicensee granted by Licensee pursuant to this Section 2.3 shall survive such termination at the written request of such sublicensees provided to UNIVERSITY, provided that the action or inaction of such sublicensee was not the cause of such termination.

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2.4 LICENSEE agrees that any sublicense granted by it shall provide that the obligations to UNIVERSITY of Articles 2, 7, 8, 9, 10, and 13 of this Agreement shall be binding upon the sublicensee as if it were party to this Agreement. Each sublicense granted by LICENSEE pursuant to this Agreement shall include an audit right by UNIVERSITY of sublicensee of the same scope as provided in Section 5.2 with respect to LICENSEE.

2.5 LICENSEE agrees to forward to UNIVERSITY a copy of any and all sublicense agreements promptly upon execution thereof, but in no event later than thirty (30) days after each such sublicense agreement has been executed by both parties thereto.

2.6 The license granted hereunder shall not be construed to confer any rights upon LICENSEE by implication, estoppel or otherwise as to any technology other than PATENT RIGHTS.

ARTICLE 3 – DUE DILIGENCE

3.1 LICENSEE shall use its commercially reasonable best efforts to bring the LICENSED TECHNOLOGY to market outside the United States as soon as practicable, consistent with sound and reasonable business practice and judgment, and to continue active, diligent marketing efforts outside the United States for the LICENSED TECHNOLOGY throughout the term of this Agreement.

3.2 In addition, LICENSEE shall adhere to each of the following milestones:

(a) Within thirty (30) months from the Effective Date of this Agreement, execute a commercial partnership agreement with a third party, or be acquired by a third party, for the purpose of commercialization of the LICENSED TECHNOLOGY outside the United States; and

(b) Within fifty-four (54) months from the Effective Date of a commercial partnership agreement with a third party, or an acquisition by a third party, achieve first commercial sale of LICENSED TECHNOLOGY outside of the United States.

3.3 LICENSEE’s failure to perform in accordance with Section 3.1 or to fulfill on a timely basis anyone of the milestones set forth in Section 3.2 hereof shall be grounds for

UNIVERSITY to terminate this Agreement pursuant to Section 10.2(a); except that for a single time, if a milestone in Section 3.2 has not been completed within the time frame allotted through no fault of LICENSEE and following the best efforts of LICENSEE to meet such milestone, LICENSEE may, on a one-time basis, notify the UNIVERSITY in writing that it desires a single six (6) month extension to meet such milestone and LICENSEE shall be deemed to have fulfilled the milestone requirement if LICENSEE makes a penalty payment of [***] dollars ($[***]) with both notice and penalty payment to be received by the UNIVERSITY within ten days of the applicable milestone achievement date. In such case the LICENSEE and UNIVERSITY shall negotiate a new time for attainment of such missed milestone (not to exceed six months) and subsequent timeframes relying upon the meeting of previous milestones may also be adjusted. If LICENSEE fails to meet any revised milestone including first missed milestone, UNIVERSITY may terminate the License and upon termination all rights and interest to the PATENT RIGHTS and any other rights granted by UNIVERSITY shall revert to UNIVERSITY.

3.4 LICENSEE shall notify UNIVERSITY in writing of the achievement of each milestone in Section 3.2 within thirty (30) days upon the achievement of the respective milestone.

ARTICLE 4 – LICENSE CONSIDERATION

4.1 In consideration of the rights, privileges and license granted by UNIVERSITY hereunder, LICENSEE shall pay royalties and other monetary consideration as follows:

(a) Initial license fee, nonrefundable and noncreditable against royalties, of [***] Dollars ($[***]) due immediately and payable within ten (10) business days from the Effective Date of this Agreement;

(b) Royalties in an amount equal to [***] Percent ([***]%) of NET SALES of the LICENSED TECHNOLOGY per calendar quarter and royalties in an amount equal to [***] Percent ([***]%) of sublicensee NET SALES per calendar quarter;

(c) A share of NON-ROYALTY SUBLICENSE INCOME of [***] Percent ([***]%).

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4.2 In the event that it should prove necessary for LICENSEE to license intellectual property rights owned by a third party in order to practice the LICENSED TECHNOLOGY in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD in order to avoid infringing the patent or other intellectual property rights of such third party, then LICENSEE shall be entitled to a credit of such third party royalties against royalties due to UNIVERSITY under Section 4.1(b) provided that (i) in no event shall the royalty rate applicable to NET SALES in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD be less than [***] percent ([***]%) and (ii) in no event shall the royalty rate applicable to NET SALES in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD from a sub-Licensee be less than [***] percent ([***]%).

4.3 All payments pursuant to this Agreement may be made by check or by wire transfer (along with applicable wire transfer, transaction, and/or foreign translation fees) in United States dollars without deduction or exchange, collection or other charges and directed to the address or, in the case of wire transfer, to the bank, set forth in Article 11. Royalty payments pursuant to Section 4.1(b) hereof shall be due within sixty (60) days after each March 31, June 30, September 30 and December 31. NON-ROYALTY SUBLICENSE INCOME payments pursuant to Section 4.1(c) hereof shall be paid within thirty (30) days after receipt of payment by LICENSEE from sublicense. Payments under Section 4.1(b) are payable on a country by country basis only in those countries in which there are PATENT RIGHTS with respect to the applicable LICENSED TECHNOLOGY.

4.4 Taxes imposed by any foreign or United States governmental agency on any payments to be made to UNIVERSITY by LICENSEE shall be paid by LICENSEE without deduction from any payment due to UNIVERSITY hereunder.

4.5 The balance of any payments pursuant to this Agreement, including those specified in Section 6.2, which are overdue shall bear interest, compounded monthly, calculated from the due date until payment is received at the rate of five percent (5%) per annum, or the prime rate (as quoted by The Wall Street Journal) plus two percent (2%), whichever is

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higher. Payment of such interest by LICENSEE shall not negate or waive the right of UNIVERSITY to seek any other remedy, legal or equitable, to which it may be entitled because of the delinquency of any payment, including, but not limited to, termination of this Agreement as set forth in Article 10. Licensee shall reimburse University for any costs and expenses incurred in connection with collecting any overdue balance of payments with respect to Licensee's payment and reimbursement obligations under this Agreement, including the costs of engaging counsel or a collection agency for such purpose.

4.6 LICENSEE shall sell products and/or services resulting from LICENSED TECHNOLOGY to UNIVERSITY and its AFFILIATES upon request at such price(s) and on such terms and conditions as such products and/or services are made available to LICENSEE'S most favored customer.

ARTICLE 5 – REPORTS AND AUDIT

5.1 Within sixty (60) days after each March 31, June 30, September 30 and December 31 of each year during the term of this Agreement beginning in the year of the first commercial sale of LICENSED TECHNOLOGY, LICENSEE shall deliver to UNIVERSITY true, accurate and detailed reports of the following information in a form as illustrated in Exhibit B:

(a) Number of product and service NET SALES for LICENSEE and all sublicensees;

(b) Total billings and receivables for all such products and services;

(c) Deductions set forth in Section 1.8, each stated separately;

(d) Total royalties due;

(e) Name and addresses of sublicensees; and

(f) Total NON-ROYALTY SUBLICENSE INCOME received during such calendar quarter and total amount of payment due pursuant to Section 4.1(c).

5.2 LICENSEE shall keep full, true and accurate books of account, in accordance with generally accepted accounting principles, containing all information that may be necessary for the purpose of showing the amounts payable to UNIVERSITY hereunder. Such books of account shall be kept at LICENSEE'S principal place of business. Such books of account shall be open at all reasonable times for [***] years following the end of the calendar year to which they pertain, and for [***] years after the expiration or termination of this Agreement, for inspection by UNIVERSITY or its agents for the purpose of verifying LICENSEE'S royalty statement or compliance in other respects with this Agreement. The fees and expenses of UNIVERSITY'S representatives shall be borne by UNIVERSITY; however, if an error of more than [***] percent ([***]%) of the total payments due or owing for any year is discovered, then LICENSEE shall bear UNIVERSITY'S fees and expenses.

5.3 No later than ninety (90) days after December 31 of each calendar year during the term of this Agreement, LICENSEE shall provide to UNIVERSITY a written annual progress report, as illustrated in Exhibit C, describing LICENSEE'S progress on research and development, regulatory approvals, manufacturing, sublicensing, marketing and sales during the preceding twelve-month period ending December 31.

5.4 Notwithstanding the above, UNIVERSITY shall have the right, on an annual basis during the term of this Agreement to inspect technical and other information from LICENSEE sufficient to evidence whether and to what extent LICENSEE is: (a) practicing the PATENT RIGHTS; and (b) meeting its diligence obligations under Article 3, above.

5.5 LICENSEE shall report to the UNIVERSITY the date of the first commercial sale of a LICENSED TECHNOLOGY within sixty (60) days of occurrence in each country.

ARTICLE 6 – PATENT PROSECUTION

6.1 UNIVERSITY has or shall apply for and seek prompt issuance of and maintain during the term of this Agreement the PATENT RIGHTS in such foreign countries as may be designated by LICENSEE in a written notice to UNIVERSITY within a reasonable time in advance of the required foreign filing dates. LICENSEE shall have the opportunity to

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advise and cooperate with UNIVERSITY in the prosecution, filing and maintenance of such patents. If UNIVERSITY decides to abandon the preparation, filing, prosecution or maintenance of any patent or patent application covered by the PATENT RIGHTS, then UNIVERSITY shall provide written notice to LICENSEE, and LICENSEE shall have the right at its sole expense to assume control of the preparation, filing, prosecution and maintenance of such patent application or patent. If LICENSEE no longer wishes to support the prosecution or maintenance of any patent or patent application covered by the PATENT RIGHTS, then LICENSEE shall provide written notice to UNIVERSITY, and LICENSEE shall not be responsible for such corresponding patent expenses that are incurred subsequent to the date of receipt by UNIVERSITY of such written notice by LICENSEE; such returned patent or patent application shall be excluded from the PATENT RIGHTS. Licensee shall notify UNIVERSITY immediately if, at any time during the term of this Agreement, LICENSEE or any of its sublicensees does not qualify as a “Small Entity” as provided by the United States Patent and Trademark Office.

6.2 All fees and costs, including attorneys’ fees, relating to the filing, prosecution, maintenance, and post grant proceedings relating to the PATENT RIGHTS shall be the responsibility of LICENSEE, whether incurred prior to or after the Effective Date. LICENSEE shall not be required to reimburse the UNIVERSITY for any fees under this section that have been paid to the UNIVERSITY by prior licensees or any other third party. Fees and costs incurred shall be paid by LICENSEE within thirty (30) days after receipt of UNIVERSITY’S invoice therefor. Additionally, Licensee shall be liable to UNIVERSITY for all of UNIVERSITY’S out-of-pocket filing, prosecution, and maintenance costs (including all attorneys’ fees and costs), for any and all patent prosecution and maintenance actions that will be taken by patent counsel after the term of this Agreement but in response to any instructions that were sent during the term of this Agreement from UNIVERSITY to patent counsel relating to the PATENT RIGHTS, with the proviso that such instructions were approved in writing by LICENSEE. Payments pursuant to this Section 6.2 are not creditable against royalties or any other payment due to UNIVERSITY under this Agreement.

6.3 LICENSEE shall own any new patent application, and any patent that issues therefrom, or new technology in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD developed independently of the UNIVERSITY and UNIVERSITY employees and shall not owe the UNIVERSITY any fee or royalty under section 4 relating to such a new patent application, and any patent that issues therefrom, or new technology.

ARTICLE 7 – INFRINGEMENT ACTIONS

7.1 LICENSEE shall inform UNIVERSITY promptly in writing of any alleged infringement of the PATENT RIGHTS by a third party and of any available evidence thereof.

7.2 During the term of this Agreement, LICENSEE shall have the right, but shall not be obligated, to prosecute at its own expense all infringements of the PATENT RIGHTS in the SLE FIELD or the MONITORING OF ORGAN TRANSPLANTATION & ORGAN REJECTION FIELD and in the TERRITORY if LICENSEE has notified UNIVERSITY in writing of its intent to prosecute; provided, however, that such right to bring such an infringement action shall remain in effect only for so long as the license granted herein remains exclusive. In furtherance of such right, UNIVERSITY hereby agrees that LICENSEE may include UNIVERSITY as a party plaintiff in any such suit, without expense to UNIVERSITY. [***].

7.3 If within six (6) months after having been notified of any alleged infringement, LICENSEE shall have been unsuccessful in persuading the alleged infringer to desist and shall not have brought and shall not be diligently prosecuting an infringement action, or if LICENSEE shall notify UNIVERSITY at any time prior thereto of its intention not to bring suit against any alleged infringer, then, and in those events only, UNIVERSITY shall have the right, but shall not be obligated, to prosecute at its own expense any

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infringement of the PATENT RIGHTS, and UNIVERSITY may, for such purposes, use the name of LICENSEE as party plaintiff. [***].

7.4 In the event that a declaratory judgment action alleging invalidity or infringement of any of the PATENT RIGHTS shall be brought against UNIVERSITY, LICENSEE, at its option, shall have the right, within thirty (30) days after commencement of such action, to intervene and take over the sole defense of the action at its own expense.

7.5 In any infringement suit either party may institute to enforce PATENT RIGHTS pursuant to this Agreement, the other party shall, at the request and expense of the party initiating such suit, cooperate in all respects and, to the extent possible, have its employees testify when requested and make available relevant records, information, samples, specimens, and other evidence upon request.

ARTICLE 8 – INDEMNIFICATION/INSURANCE/LIMITATION OF LIABILITY

8.1 LICENSEE shall at all times during the term of this Agreement and thereafter indemnify, defend and hold UNIVERSITY, its trustees, officers, faculty member, employees and Affiliates ("INDEMNIFIED PARTIES") harmless against all claims and expenses, including legal expenses and reasonable attorneys' fees, arising out of the death of or injury to any person or persons or out of any damage to property or the environment, and against any other claim, proceeding, demand, expense and liability of any kind whatsoever resulting from: (i) the production, manufacture, sale, use, lease, consumption or advertisement of the LICENSED TECHNOLOGY by Licensee to its sublicensees, (ii) the practice by LICENSEE or any Affiliate or sublicensee of the PATENT RIGHTS; or (iii) arising from or relating to this License Agreement. LICENSEE shall provide this defense and indemnity whether or not any INDEMNIFIED PARTIES, either jointly or severally, is named as a party defendant and whether or not any INDEMNIFIED PARTIES is alleged to be negligent or otherwise responsible for any injuries to person or property. The obligation of LICENSEE to defend and indemnify as set forth herein shall

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survive termination of this Agreement and shall not be limited by any other limitation of liability elsewhere in this Agreement.

8.2 LICENSEE shall obtain and carry in full force and effect liability insurance which shall protect LICENSEE and UNIVERSITY in regard to events covered by Section 8.1 above, as provided below:

	COVERAGE	LIMITS
(a)	Commercial General Liability, including, but not limited to, Products, Contractual, Fire, Legal and Personal Injury	$1,000,000 Combined Single Limits for Bodily Injury and Property Damage
(b)	Professional Liability	$5,000,000
(c)	Products Liability	$5,000,000, to be effective on or before the date of first sale of LICENSED TECHNOLOGY products.

The UNIVERSITY of Pittsburgh is to be named as an additional insured with respect to insurance policies identified in Sections 8.2(a), 8.2(b), and 8.2(c) above. Certificates of insurance evidencing the coverage required above shall be filed with the UNIVERSITY'S Office of Technology Management, 200 Gardner Steel Conference Center, Pittsburgh, PA 15260, no later than fifteen (15) days after execution of this Agreement and annually thereafter. Such certificates shall provide that the insurer will give the UNIVERSITY not less than thirty (30) days advance written notice of any material changes in or cancellation of coverage.

8.3 UNIVERSITY, AND ITS AGENTS AND/OR EMPLOYEES, MAKE NO REPRESENTATION AND EXTEND NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND VALIDITY OF PATENT RIGHTS CLAIMS, ISSUED OR PENDING. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS A REPRESENTATION OR WARRANTY THAT THE PRACTICE BY LICENSEE OF THE LICENSE GRANTED HEREUNDER SHALL NOT INFRINGE THE PATENT RIGHTS OF ANY THIRD

PARTY. UNIVERSITY ADDITIONALLY DISCLAIMS ALL OBLIGATIONS AND LIABILITIES ON THE PART OF UNIVERSITY, ITS AGENTS AND/OR EMPLOYEES FOR DAMAGES, INCLUDING, BUT NOT LIMITED TO, DIRECT, INDIRECT, SPECIAL AND CONSEQUENTIAL DAMAGES, ATTORNEYS' AND EXPERTS' FEES, AND COURT COSTS (EVEN IF UNIVERSITY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, FEES OR COSTS), ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, INCLUDING THE MANUFACTURE, USE OR SALE OF THE PRODUCT(S) AND SERVICE(S) LICENSED UNDER THIS AGREEMENT. LICENSEE ASSUMES ALL RESPONSIBILITY AND LIABILITY FOR LOSS OR DAMAGE CAUSED BY A PRODUCT THAT IS MANUFACTURED, USED OR SOLD BY LICENSEE (INCLUDING SUBLICENSEE SALES) WHICH IS LICENSED TECHNOLOGY HEREUNDER.

ARTICLE 9 – ASSIGNMENT

Except as expressly provided hereunder, this Agreement is not assignable without the prior written consent of UNIVERSITY which consent shall not be unreasonably withheld, and any attempt to do so shall be null and void, provided that LICENSEE may assign this Agreement and its rights and obligations thereunder, without the UNIVERSITY'S prior written consent in connection with the transfer or sale of all or substantially all of the LICENSEE'S business relating to the PATENT RIGHTS and LICENSED TECHNOLOGY to a third party, whether by merger, sale of stock, sale of assets or otherwise subject to LICENSEE providing at least 10 business days written notification to UNIVERSITY and further subject to the assignee agreeing in writing to be bound to all the terms and conditions of this License. The rights and obligations of the parties under this Agreement shall be binding upon and inure to the benefit of the successors and permitted assigns of the parties. Any assignment not in accordance with this Article 9 shall be null and void.

ARTICLE 10 – TERM AND TERMINATION

10.1 This Agreement shall terminate upon the expiration of the last surviving claim of the PATENT RIGHTS.

10.2 UNIVERSITY shall have the right to terminate this Agreement, upon written notice, if:

(a) LICENSEE defaults in the performance of any of the obligations herein contained and such default has not been cured within [***] days after receiving written notice thereof from UNIVERSITY; or

(b) LICENSEE ceases to carry out its business, becomes bankrupt or insolvent, applies for or consents to the appointment of a trustee, receiver or liquidator of its assets or seeks relief under any law for the aid of debtors.

10.3 LICENSEE may terminate this Agreement upon six (6) months prior written notice to UNIVERSITY and upon payment of all amounts accrued or due to UNIVERSITY through the effective date of termination, including patent cost reimbursement pursuant to Article 6 hereof.

10.4 Upon termination of this Agreement, neither party shall be released from any obligation that matured prior to the effective date of such termination. LICENSEE and any sublicensee may, however, after the effective date of such termination, sell all products under the LICENSED TECHNOLOGY which LICENSEE produced prior to the effective date of such termination, provided that LICENSEE shall pay to UNIVERSITY the royalties thereon as required by Article 4 hereof and submit the reports required by Article 5 hereof.

ARTICLE 11 – NOTICES

11.1 Any notice or communication pursuant to this Agreement shall be sufficiently made or given if sent by certified or registered mail, postage prepaid, or by overnight courier, with proof of delivery by receipt, addressed to the address below or as either party shall designate by written notice to the other party, or if in accordance with Section 11.3.

In the case of University:

Associate Vice Chancellor for Technology Management and Commercialization

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Office of Technology Management
University of Pittsburgh
200 Gardner Steel Conference Center
Thackeray & O'Hara Streets
Pittsburgh, PA 15260

In the case of LICENSEE:

Exagen Diagnostics, Inc.
800 Bradbury Drive SE
Suite 108
Albuquerque, NM 87106
Attn: President and CEO

11.2 Any payments to University hereunder by wire transfer shall be directed as follows:

Bank: Mellon Bank, NA, Pittsburgh, PA
ABA Routing No.: 043000261-University of Pittsburgh
Account No.: 0015510
Mellon SWIFT Code: MELNUS3P (international transfers)
Reference Code: Office of Technology Management, Accountant -
otmfinbx@pitt.edu - (412) 648-2226

LICENSEE shall be responsible for all applicable fees and costs relating to any wire transfer, to include translation fees, without any deduction of such fees from amounts due to the UNIVERSITY pursuant to this Agreement.

11.3 All invoices to LICENSEE generated by UNIVERSITY under this Agreement will be sent electronically, via e-mail, in PDF format, unless instructed otherwise by LICENSEE in writing.

ARTICLE 12 – AMENDMENT, MODIFICATION

This Agreement may not be amended or modified except by the execution of a written instrument signed by the UNIVERSITY'S Executive Vice Chancellor, or its successor and/or designated UNIVERSITY employee having signatory authority, and LICENSEE'S President. In connection with any agreed upon amendment or modification of this Agreement pursuant to this Article 12, LICENSEE shall be required to pay an Amendment Fee.

ARTICLE 13 – MISCELLANEOUS

13.1 This Agreement shall be construed and interpreted in accordance with the laws of the Commonwealth of Pennsylvania. The forum for any action relating to this Agreement, including those brought against individuals such as UNIVERSITY employees or agents, shall be the Courts of Allegheny County, Pennsylvania, or, if in a federal proceeding, the United States District Court for the Western District of Pennsylvania.

13.2 The parties acknowledge that this Agreement sets forth the entire understanding and intentions of the parties hereto as to the subject matter hereof and supersedes all previous representations, negotiations, or understandings between the parties and/or its employees or agents, whether written or oral, regarding the subject matter of this Agreement.

13.3 Nothing contained in this Agreement shall be construed as conferring upon either party any right to use in advertising, publicity or other promotional activities any name, trade name, trademark, or other designation of the other party, including any contraction, abbreviation, or simulation of any of the foregoing. Without the express written approval of the other party, neither party shall use any designation of the other party in any promotional activity associated with this Agreement or the LICENSED TECHNOLOGY. Neither party shall issue any press release or make any public statement in regard to this Agreement without the prior written approval of the other party, except LICENSEE may make such disclosures as are necessary or appropriate to comply with its obligations under applicable laws, rules and regulations of the Securities and Exchange Commission and securities exchange upon which LICENSEE'S securities are listed.

13.4 If one or more of the provisions of this Agreement shall be held invalid, illegal or unenforceable, the remaining provisions shall not in any way be affected or impaired thereby. In the event any provision is held illegal or unenforceable, the parties shall use reasonable efforts to substitute a valid, legal and enforceable provision which, insofar as is practical, implements purposes of the provision held invalid, illegal or unenforceable.

13.5 Failure at any time to require performance of any of the provisions herein shall not waive or diminish a party's right thereafter to demand compliance therewith or with any other

provision. Waiver of any default shall not waive any other default. A party shall not be deemed to have waived any rights hereunder unless such waiver is in writing and signed by a duly authorized officer of the party making such waiver.

13.6 LICENSEE acknowledges that UNIVERSITY is free to publish the results of the research activities of its faculty, staff and students, even though such publication may involve the PATENT RIGHTS or LICENSED TECHNOLOGY. UNIVERSITY agrees to submit to LICENSEE any proposed publication or presentation regarding the subject matter specifically described in the PATENT RIGHTS for prior review by LICENSEE at least [***] days before its submittal for publication or its presentation. LICENSEE may, within [***] days after receipt of such proposed publication, request that such proposed publication be delayed not more than [***] days in order to allow for protection of intellectual property rights.

13.7 The term “Confidential Information” shall mean any and all proprietary or confidential information of UNIVERSITY or LICENSEE which may be exchanged between parties at any time and from time to time during the term of this Agreement. Information shall not be considered confidential to the extent that either party can establish by competent proof that it: (i) is publically disclosed through no fault of any party hereto, either before or after it becomes known to the receiving party; (ii) was known to the receiving party prior to the date of this Agreement, which knowledge was acquired independently and not from another party hereto (or such party’s employees); (iii) is subsequently disclosed to the receiving party in good faith by a third party who has a right to make such disclosure; or (iv) has been published by a third party as a matter of right. The parties agree that during the term of this Agreement, and for a period of [***] years after this Agreement terminates, a party receiving Confidential Information of the other party will (a) maintain in confidence such Confidential Information; (b) not disclose such Confidential Information to any third party and (c) not use such confidential Information for any purpose except those permitted in this Agreement. Notwithstanding the foregoing, if a party is required by law, regulation or court order to disclose Confidential Information of the other party, the party required to make such disclosure shall limit the same to the minimum required to make such disclosure shall limit the same to the minimum required

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to comply with the law or court order, and shall use reasonable efforts to attempt to seek confidential treatment for that disclosure, and prior to making such disclosure that party shall notify the other party shall notify the other party, not later than ten (10) days (or shorter period of time as may be practicable under the circumstances) before the disclosure in order to allow that other party to comment and/or to obtain protective or other order, including extensions of time and the like, with respect to such disclosure. In addition, a party may disclose Confidential Information to the other party to employees, to sublicensees and potential sublicensees (in the case of LICENSEE), or to other third parties in connection with due diligence or similar investigations by third parties or potential third party investors in confidential financing document, provided, in each case, that any such employee, consultant, agent, sublicense, potential sublicense or other third party agrees in writing to be bound by terms of confidentiality and non-use at least as stringent as those set forth in this Section 13.7.

13.8 The parties acknowledge that they consulted, or had the opportunity to investigate and/or consult, with their legal counsel and/or other advisors with respect to the PATENT RIGHTS, LICENSED TECHNOLOGY, and the terms of this Agreement.

13.9 The parties agree that this Agreement constitutes an arm's length business transaction and does not create a fiduciary relationship.

13.10 LICENSEE agrees that with respect to the performance of this Agreement or the practice of the rights granted by the UNIVERSITY hereunder, it shall comply with any and all applicable United States export control laws and regulations, as well as any and all embargoes and/or other restrictions imposed by the Treasury Department's Office of Foreign Asset Controls.

13.11 If LICENSEE challenges the validity or enforceability of UNIVERSITY'S PATENT RIGHTS or UNIVERSITY'S ownership of the PATENT RIGHTS anywhere in the world, the LICENSEE shall continue to pay to UNIVERSITY all royalties and other financial obligations required under this Agreement, to include patent costs and fees. If any such challenge is unsuccessful by Licensee, the royalty rates and any non-royalty sublicense income rate set forth in Article 4.1 above shall automatically double in value,

to include all royalty minimums and floors; and Licensee shall reimburse the University for all fees and costs associated with defending such action, including but not limited to attorneys fees and expert fees. The effective date of such increase in royalty rates shall be the date of the first court order or date of issuance of a re-examination certificate (or foreign equivalents thereof) declaring any claim of the PATENT RIGHTS as valid or enforceable. Within thirty (30) days prior to filing any such challenge, LICENSEE shall provide the UNIVERSITY with written notice of its intent to make such challenge.

13.12 Licensee shall mark all Licensed Technology with applicable foreign patent numbers in accordance with the applicable laws of the countries in which Licensed Technology is used or sold.

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IN WITNESS WHEREOF, the parties represent and warrant that each has the authority to bind the party to this Agreement and have set their hands and seals as of the date set forth on the first page hereof.

UNIVERSITY OF PITTSBURGH – OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION

By /s/ Jerome Cochran
Jerome Cochran
Executive Vice Chancellor

EXAGEN DIAGNOSTICS, INC.

By /s/ Ron Rocca
Name: Ron Rocca
Title: C.E.O.

EXHIBIT A

PATENT RIGHTS FOR EXCLUSIVE LICENSE AGREEMENT BETWEEN THE UNIVERSITY OF PITTSBURGH AND EXAGEN DIAGNOSTICS, INC.

Univ. Case No.	Application No.	Application Filing Date	Patent No.	Patent Issuance Date	Title	Country
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EXHIBIT B
SAMPLE ROYALTY REPORT

Licensee name:
Reporting period:
Date of report:

Royalty Reporting Form

Product	No. units sold (including sublicense)	Invoiced price per unit	Gross sales	Allowable deductions	Net sales
Product name					
Product name					
Product name					
Product name					
Total					

Total net sales	$
Royalty rate	
Royalty due	$

Total royalty due: $

Name and addresses of sublicensees:

Total non-royalty sublicense income: $

Report prepared by:
Title:
Date:

EXHIBIT C
SAMPLE PROGRESS REPORT

Licensee name:
Report date:
Technology title:

Progress Report

A. Date development plan initiated and time period covered by this report

B. Development report

1. Activities, e.g., research and development, regulatory approvals, manufacturing, sublicensing, marketing and sales, etc., completed since last report including the object and parameters of the development, when initiated, when completed and the results

2. Activities currently under investigations, i.e., ongoing activities including object and parameters of such activities, when initiated, and projected date of completion

C. Future development activities

1. Activities to be undertaken before next report including, but not limited to, the type and object of any studies conducted and their projected starting and completion dates

2. Estimated total development time remaining before a product will be commercialized

D. Changes to initial development plan

1. Reasons for change

2. Variables that may cause additional changes

E. Items to be provided if applicable:

1. Information relating to product that has become publicly available, e.g., published articles, competing products, patents, etc.

2. Development work being performed by third parties other than Licensee to include name of third party, reasons for use of third party, planned future use of third parties including reasons why and type of work

3. Update of competitive information trends in industry, government compliance, and market plan

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

EXCLUSIVE LICENSE AGREEMENT

This Agreement ("Agreement") is made and entered into as of the 5th day of September, 2011 ("EFFECTIVE DATE"), by and between Thierry DERVIEUX an individual and his company DeNovo, a California limited liability corporation, located at, 240 Coral Rose Irvine, CA 92603 ("DERVIEUX"), and EXAGEN DIAGNOSTICS, INC., a corporation organized and existing under the laws of Delaware, having an office at 801 University Blvd. SE Suite 103 Albuquerque, NM 87106 ("EXAGEN").

WHEREAS, DERVIEUX is the inventor and owner of certain PATENT RIGHTS, as noted in Schedule A, consisting of certain patents and patent applications, and has the right to grant licenses under such PATENT RIGHTS and has certain DERVIEUX KNOW-HOW;

WHEREAS, EXAGEN is experienced in the development, production, manufacture, marketing and sale of products and/or the use of similar products to the LICENSED TECHNOLOGY and

WHEREAS, EXAGEN desires to obtain a license under the PATENT RIGHTS AND DERVIEUX KNOW-HOW upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto, intending to be legally bound, agree as follows:

ARTICLE I - DEFINITIONS

For purposes of this Agreement, the following words and phrases shall have the following meanings:

1.1 "AFFILIATE" shall mean, with respect to either party, any entity that is controlled, operated or managed by a party, whether or not owned by such party.

1.2 "KNOW-HOW" shall mean any and all technical, scientific and other know-how and information, trade secrets, knowledge, technology, means, methods, processes, practices, formulas, instructions, skills, techniques, procedures, ideas, data, results and other information and materials relating to LICENSED TECHNOLOGY.

1.3 “EXAGEN TECHNOLOGY” shall mean any and all technical, scientific and other know-how and information, trade secrets, knowledge, technology, means, methods, processes, practices, formulas, instructions, skills, techniques, procedures, ideas, data, results and other information and materials used by EXAGEN to make products.

1.3 “FIELD OF USE” shall mean and include LICENSED TECHNOLOGY for use in the human healthcare market.

1.4 “IMPROVEMENTS” for DERVIEUX shall mean any improvements or enhancements made by either party to LICENSED TECHNOLOGY. For EXAGEN it shall mean any improvements made to EXAGEN TECHNOLOGY.

1.5 “LICENSED TECHNOLOGY” shall be the Patents Rights, Improvements and Know-How described in this Agreement including the Exhibit A herein.

1.6 “PATENT RIGHTS” shall mean the intellectual property described below:

(a) Patents and/or patent applications listed in Exhibit A;

(b) All patents issued from the applications listed in Exhibit A and from divisionals and continuations and continuations in part of these applications; and

(c) Claims of all continuation in part and divisional applications, and of the resulting patents, which are directed to subject matter specifically described in applications listed in Exhibit A.

1.7 “NET SALES” shall mean the amount collected by EXAGEN or its AFFILIATES to third parties while using LICENSED TECHNOLOGY and services or testing using the LICENSED TECHNOLOGY and services. Such amount shall be the net amount collected less only:

(a) Actual cost of freight, shipping and insurance charges or freight absorption if separately stated in such invoice;

(b) Actual trade, quantity or cash discounts actually allowed, to include discounts to managed care organizations, so long as such discounts: (i) are in amounts customary in the trade, and do not violate federal state laws or regulations;

(c) Actual credits and allowances granted for rightful product returns and recalls;

(d) Rebates paid or credited to managed care organizations and governmental agencies with respect to Medicaid, Medicare or similar state and federal government programs;

(e) Sales taxes, tariff duties and/or use taxes actually paid if separately stated on each invoice; and

(f) Pass through costs for cost of acquiring the blood sample.

1.8 "TERRITORY" shall mean Worldwide except Australia and New Zealand.

ARTICLE 2 – LICENSE GRANT

2 Subject to the terms and conditions of this Agreement, DERVIEUX hereby grants to EXAGEN, the exclusive right and license to develop, make, have made, use, offer for sale, import and sell the LICENSED TECHNOLOGY in the TERRITORY within the FIELD OF USE and in such connection to practice under DERVIEUX KNOW-HOW and the PATENT RIGHTS until the last patent expires on a country by country basis, unless this Agreement is terminated as provided herein.

ARTICLE 3 - DUE DILIGENCE

3.1 EXAGEN shall use its commercially reasonable efforts to bring the LICENSED TECHNOLOGY to market as soon as practicable, consistent with sound and reasonable business practice and judgment, and to continue active, diligent efforts for the commercialization of the LICENSED TECHNOLOGY in the TERRITORY throughout the term of this Agreement.

3.2 Upon execution of this Agreement, DERVIEUX will provide EXAGEN access and support to the following products, services and other activities:

(a) Assistance with technology transfer.

(b) Assistance with the establishment of clinical performances.

(c) DERVIEUX will use its commercially reasonable efforts to assist with ongoing clinical validation of the Licensed Technology.

(d) Preparation and compilation of Key scientific publications.

(e) Sharing of new clinical data especially on-going clinical activities.

3.3 The parties agree to work on new product development using the LICENSED TECHNOLOGY.

3.4. EXAGEN shall own any IMPROVEMENTS made to LICENSED TECHNOLOGY made by EXAGEN or by DERVIEUX while employed by or is a consultant of EXAGEN, including any IMPROVEMENTS that is a result of the efforts described in section 3.2 and 3.3 above. EXAGEN shall have the option and right to file, prosecute, maintain, defend and enforce any relevant patents, at its sole expense and in its sole name or the name of its designee. Such IMPROVEMENTS are for the duration of this Agreement to the extent necessary/applicable included under the license grant in section 2.

3.5 EXAGEN shall own any IMPROVEMENTS made to all non-LICENSED TECHNOLOGY, including those to EXAGEN TECHNOLOGY and any IMPROVEMENTS that is a result of the efforts described in section 3.2 and 3.3 above.

3.6 EXAGEN's material failure to perform in accordance with Section 3.1 hereof shall be grounds for DERVIEUX to terminate this Agreement pursuant to Section 10.3(a); except that through no fault of EXAGEN and following the commercially reasonable efforts of EXAGEN. Upon termination or expiration of this Agreement for any reason (except for DERVIEUX'S material breach) all rights and interest to the PATENT RIGHTS, DERVIEUX KNOW-HOW AND DERVIEUX IMPROVEMENTS and any other rights granted by DERVIEUX shall revert to DERVIEUX.

ARTICLE 4 - LICENSE CONSIDERATION – DELIVERY CONDITIONS

4.1 In consideration of the rights, privileges and license granted by DERVIEUX hereunder, EXAGEN shall pay royalties and other monetary consideration as follows:

(a) One time [***] dollars ($[***] US$) upon the issuance of first invoice for sale or use of LICENSED TECHNOLOGY using PATENT RIGHTS.

(b) One time [***] dollars ($[***] US$) upon attaining $[***] in NET SALES in a calendar year using LICENSED TECHNOLOGY and PATENT RIGHTS.

(c) One time [***] dollars ($[***] US$) upon attaining $[***] in NET SALES in a calendar year using LICENSED TECHNOLOGY and PATENT RIGHTS.

(d) Royalty of [***]% of NET SALES for products using or comprising LICENSED TECHNOLOGY, using PATENT RIGHTS. If LICENSED TECHNOLOGY is used in combination with other technologies not using LICENSED TECHNOLOGY, the Royalties will be calculated using that portion of NET SALES attributable to LICENSED TECHNOLOGY.

(e) If such LICENSED TECHNOLOGY is sub licensed to a third party, DERVIEUX shall receive [***]% of all license fees and royalties attributed to the LICENSED TECHNOLOGY.

4.2 In the event that it should prove necessary for EXAGEN to license intellectual property rights owned by a third party in order to practice the LICENSED TECHNOLOGY in order to avoid infringing the patent or other intellectual property rights of such third party, then EXAGEN shall be entitled to [***]% of a credit of such third party royalties against royalties due to DERVIEUX under Section 4.1, provided that (i) in no event shall the royalty rate applicable to NET SALES payable to DERVIEUX be less than [***] percent ([***]%).

*** Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

4.3 All payments pursuant to this Agreement may be made in United States dollars. Payments under Section 4.1(d) are payable on a country by country basis only in those countries in which there are Patent Rights with respect to the applicable Licensed Technology.

ARTICLE 5 - REPORTS

5.1 Within sixty (60) days after each March 31, June 30, September 30 and December 31 of each year during the term of this Agreement beginning in the year of the first commercial sale of LICENSED TECHNOLOGY, EXAGEN shall make payment and deliver to DERVIEUX reports of:

(a) Total collections for all such products; and

(b) Total royalties due.

5.2 EXAGEN shall keep full, true and accurate books of account, in accordance with generally accepted accounting principles, containing all information that may be necessary for the purpose of showing the amounts payable to DERVIEUX hereunder. Such books of account shall be kept at EXAGEN's principal place of business. Such books and the supporting data related thereto shall be made available at reasonable times for no more than once a calendar year for three (3) years following the end of the calendar year to which they pertain to the inspection of DERVIEUX or its agents for the purpose of verifying EXAGEN'S royalty statement or compliance in other respects with this Agreement. The fees and expenses of DERVIEUX'S representatives shall be borne by DERVIEUX; however, if an error of more than [***] percent ([***]%) of the total payments, then EXAGEN shall bear the fees and expenses of DERVIEUX'S representatives.

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ARTICLE 6 - PATENT PROSECUTION

6.1 EXAGEN with DERVIEUX shall apply for and seek prompt issuance of and maintain during the term of this Agreement the PATENT RIGHTS in the United States, Australia and other countries it may designate as pertinent in the TERRITORY. EXAGEN shall have the right to determine and manage the legal strategy and prosecute the PATENT RIGHTS.

6.2 If EXAGEN decides not to seek patent coverage in any country in the Territory, then DERVIEUX may give a 60 day notice to EXAGEN that it will seek patent coverage. If EXAGEN does not take action within that time period, DERVIEUX shall have the right to file for such coverage at his own cost. If such patent is issued, all rights for that country would revert to DERVIEUX.

6.3 Except as noted in Section 6.2 all fees and costs including attorneys' fees relating to the filing, prosecution and maintenance of the PATENT RIGHTS in the TERRITORY shall be the responsibility of EXAGEN.

ARTICLE 7 - INFRINGEMENT ACTIONS

7.1 EXAGEN shall inform DERVIEUX promptly in writing of any alleged infringement of the PATENT RIGHTS by a third party and of any available evidence thereof.

7.2 During the term of this Agreement, EXAGEN shall be responsible, but shall not be obligated, to prosecute at its own expense all infringements of the PATENT RIGHTS in the TERRITORY. In furtherance of such right, DERVIEUX hereby agrees that EXAGEN may include DERVIEUX as a party plaintiff in any such suit, without expense to DERVIEUX. The total cost of any such infringement action commenced or defended solely by EXAGEN shall be borne by EXAGEN and EXAGEN shall receive any recovery or damages for past infringement derived therefrom.

7.3 If within thirty (30) days after having been notified of any alleged infringement, EXAGEN shall have been unsuccessful in persuading the alleged infringer to desist and shall not have brought and shall not be diligently prosecuting an infringement action, or if EXAGEN shall notify DERVIEUX at any time prior thereto of its intention not to bring

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suit against any alleged infringer, then, and in those events only, DERVIEUX shall have the right, but shall not be obligated, to prosecute at its own expense any infringement of the PATENT RIGHTS, and DERVIEUX may, for such purposes, use the name of EXAGEN as party plaintiff. DERVIEUX shall bear all costs and expenses of any such suit. In any settlement or other conclusion, by litigation or otherwise, [***].

7.4 In the event that a declaratory judgment action alleging invalidity or infringement of any of the PATENT RIGHTS shall be brought against DERVIEUX, at its option, shall have the right, within thirty (30) days after commencement of such action, to intervene and take over the sole defense of the action at its own expense.

7.5 In any infringement suit either party may institute to enforce the PATENT RIGHTS pursuant to this Agreement, the other party shall, at the request and expense of the party initiating such suit, cooperate in all respects and, to the extent possible, have its employees testify when requested and make available relevant records, papers, information, samples, specimens, and the like.

ARTICLE 8 – DERVIEUX WARRANTIES - INDEMNIFICATION - DISCLAIMER/LIMITATION OF LIABILITY

8.1 DERVIEUX hereby warrants that the Patent filings, delivered to EXAGEN to the best of his knowledge not infringe any existing or filed patents by himself or a third party and that no other parties have right to the disclosures make within. DERVIEUX makes no representation or warranty that the end products developed by EXAGEN will meet the requirements of regulatory authorities.

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES A REPRESENTATION OR WARRANTY OF ANY KIND WHATSOEVER, WHETHER EXPRESS OR IMPLIED

8.2 EXAGEN shall at all times during the term of this Agreement and thereafter indemnify, defend and hold DERVIEUX harmless against all claims and expenses, including legal

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expenses and reasonable attorneys' fees, arising out of a) EXAGEN's activities under this Agreement or b) EXAGEN's breach of this Agreement. EXAGEN shall provide this defense and indemnify, the parties are named either jointly or severally, as a party defendant. The obligation of EXAGEN to defend and indemnify as set forth herein shall survive termination of this Agreement and shall not be limited by any other limitation of liability elsewhere in this Agreement.

8.3 DERVIEUX shall at all times during the term of this Agreement and thereafter indemnify, defend and hold EXAGEN harmless against all claims and expenses, including legal expenses and reasonable attorneys' fees, arising out of DERVIEUXS breach of warranties made under this Agreement. DERVIEUX shall provide this defense and indemnify, the parties named either jointly or severally, as a party defendant. The obligation of DERVIEUX to defend and indemnify as set forth herein shall survive termination of this Agreement and shall not be limited by any other limitation of liability elsewhere in this Agreement.

ARTICLE 9 - ASSIGNMENT

9 Except as expressly provided hereunder, this Agreement is not assignable without the prior written consent of the other party which consent shall not be unreasonably withheld, provided that either party may assign this Agreement and its rights and obligations thereunder, without the other party's prior written consent in connection with the transfer or sale of all or substantially all of the assignee's business relating to this agreement to a third party, whether by merger, sale of stock, sale of assets or otherwise subject to the assigning party providing at least 10 business days written notification to the other party and further subject to the assignee agreeing writing to be bound to all the terms and conditions of this License. The rights and obligations of the parties under this Agreement shall be binding upon and inure to the benefit of the successors and permitted assigns of the parties.

ARTICLE 10 - TERMINATION

10.1 This Agreement shall remain in force until terminated by a party pursuant to the provisions below.

10.2 EXAGEN may terminate this Agreement for convenience upon 12 months written notice.

10.3 Either party shall have the right to terminate this Agreement for material breach if:

(a) A party shall default in the performance of any of the obligations herein contained and such default has not been cured within [***] days after receiving written notice thereof; or

(b) Either party shall cease to carry out its business, become bankrupt or insolvent, apply for or consent to the appointment of a trustee, receiver or liquidator of its assets or seek relief under any law for the aid of debtors.

10.4 Upon termination of this Agreement, neither party shall be released from any obligation that matured prior to the effective date of such termination. EXAGEN and any affiliate may, however, for a maximum of six months after the effective date of such termination, sell all products under the LICENSED TECHNOLOGY which EXAGEN produced prior to the effective date of such termination, provided that EXAGEN shall pay to DERVIEUX the royalties thereon as required by Article 4 hereof.

ARTICLE 11 – NOTICES

11 Any payment, notice or communication pursuant to this Agreement shall be sufficiently made or given if sent by certified or registered mail, postage prepaid, or by overnight courier, with proof of delivery by receipt, addressed to the address below or as either party shall designate by written notice to the other party.

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In the case of DERVIEUX:

Thierry Dervieux
240 Coral Rose
Irvine, CA 92603

In the case of EXAGEN:

EXAGEN Diagnostics, Inc.
801 University Blvd SE
Suite 103
Albuquerque, NM 87106
Attn: President

ARTICLE 12 - AMENDMENT, MODIFICATION

12 This Agreement may not be amended or modified except by the execution of a written instrument signed by the parties hereto.

ARTICLE 13 - MISCELLANEOUS

13.1 This Agreement shall be construed and interpreted in accordance with the laws of the state of New Mexico. Any dispute arising out of or in connection with this contract, including any disputes regarding the existence, validity or termination, shall be settled by arbitration arranged by using an arbiter of mutual agreement.

13.2 The parties acknowledge that this Agreement sets forth the entire understanding and intentions of the parties hereto as to the subject matter hereof and all previous understandings between the parties, written or oral, regarding such subject matter.

13.3 Nothing contained in this Agreement shall be construed as conferring upon either party any right to use in advertising, publicity or other promotional activities any name, trade name, trademark, or other designation of the other party, including any contraction, abbreviation, or simulation of any of the foregoing.

13.4 If one or more of the provisions of this Agreement shall be held invalid, illegal or unenforceable, the remaining provisions shall not in any way be affected or impaired thereby. In the event any provision is held illegal or unenforceable, the parties shall use reasonable efforts to substitute a valid, legal and enforceable provision which, insofar as is practical, implements purposes of the provision held invalid, illegal or unenforceable.

13.5 Failure at any time to require performance of any of the provisions herein shall not waive or diminish a party's right thereafter to demand compliance therewith or with any other provision. Waiver of any default shall not waive any other default. A party shall not be deemed to have waived any rights hereunder unless such waiver is in writing and signed by a duly authorized officer of the party making such waiver.

13.6 The parties acknowledge that both parties are free to publish the results of the research and commercial activities under this Agreement and that the publications may involve the PATENT RIGHTS or LICENSED TECHNOLOGY. DERVIEUX agrees to supply to EXAGEN any proposed publication or presentation regarding the subject matter specifically described in the PATENT RIGHTS at least [***] days before its submittal for publication or its presentation so it may have ample time to prepare commercial strategies and support material.

13.7 The term "Confidential Information" shall mean any and all proprietary or confidential information of DERVIEUX or EXAGEN which may be exchanged between parties at any time and from time to time during the term of this Agreement. Information shall not be considered confidential to the extent that either party can establish by competent proof that it: (i) is publically disclosed through no fault of any party hereto, either before or after it becomes known to the receiving party; (ii) was known to the receiving party prior to the date of this Agreement, which knowledge was acquired independently and not from another party hereto (or such party's employees); (iii) is subsequently disclosed to the receiving party in good faith by a third party who has a right to make such disclosure; or (iv) has been published by a third party as a matter of right. The parties agree that during the term of this Agreement, and for a period of five (5) years after this Agreement terminates, a party receiving Confidential Information of the other party will (a) maintain in confidence such Confidential Information; (b) not disclose such Confidential Information to any third party and (c) not use such confidential Information for any purpose except those permitted in this Agreement. Notwithstanding the foregoing, if a party is required by law, regulation or court order to disclose Confidential Information of the other party, the party required to make such disclosure shall limit the same to the minimum required to make such disclosure shall limit the same to the minimum required to comply with the law or court order, and shall use reasonable efforts to attempt to seek confidential treatment for that disclosure, and prior to making such disclosure that party shall notify the other party shall notify the other party, not later than ten (10) days (or shorter period of time as may be practicable under the circumstances) before the disclosure in order to allow that other party to comment and/or to obtain protective or other order, including extensions of time and the like, with respect to such disclosure. In addition, a party may disclose Confidential Information to the other party to employees, board members and potential partners, acquirers, or to other third parties in connection with due diligence or similar investigations by third parties or potential third party investors in confidential financing document, provided, in each case, that any such employee, consultant, agent, sublicense, potential sublicense or other third party agrees to be bound by terms of confidentiality and non-use.

IN WITNESS WHEREOF, the parties have set their hands and seals as of the date set forth on the first page hereof.

DERVIEUX

By /s/ Thierry Dervieux
Thierry Dervieux

EXAGEN DIAGNOSTICS, INC.

By /s/ Scott L. Glenn
Scott L. Glenn
Chairman/CEO

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EXHIBIT A

PATENT RIGHTS

Title	Inventor	Application No. Filing Date
[***]	[***]	[***]

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CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

CO-PROMOTION AGREEMENT

This Co-Promotion Agreement (this "**Agreement**") is signed as of the signature date(s) below and made effective as of December 10, 2018 (the "**Effective Date**") by and between Janssen Biotech, Inc., with offices at 800 Ridgeview Drive, Horsham, PA 19044 ("**JBI**"), and Exagen Diagnostics Inc., with offices at 1261 Liberty Way, Suite C, Vista CA 92081 ("**Exagen**").

WHEREAS, Exagen is in the business of providing sales and promotion services and related deliverables and JBI wishes to engage Exagen for such types of services; and

WHEREAS, various sales and promotion services will be related to SIMPONI® (golimumab) 50mg dose ("**Product**") once-monthly self-injectable biologic for treatment of adults with (1) moderate to severe rheumatoid arthritis (RA), given with MTX, (2) active psoriatic arthritis (PsA), given alone or with MTX, and (3) active ankylosing spondylitis (AS) ("**Permitted Indications**").

NOW, THEREFORE, in consideration of the premises and of the mutual promises and covenants herein contained, the parties hereto agree as follows:

1. SUPPLY OF SERVICES

1.1. During the Term of this Agreement, Exagen shall provide JBI with Promotional Activities as described further below (the "**Services**"):

1.1.1. Exagen shall have the right to market, promote and detail the Product for the Permitted Indications (the "**Promotional Activities**") only to Rheumatology specialists in the markets expressly identified in the target universe (the "**Territory**"), as detailed further in Exhibit A and which may be updated by the parties on the quarterly basis. The Territory shall be defined based on local and regional markets (identified by zip code) in which Exagen shall have rights to promote the Product and upon which its Promotion Fee shall be based.

1.1.2. Except as provided in the terms of the agreement, all business decisions concerning the manner and extent of Promotional Activities by Exagen, including communications with customers, the number of sales representatives assigned to market the Product and the compensation of such sales representatives shall be at the sole discretion of Exagen.

1.1.3. Exagen shall only market, promote and detail the Product for Permitted Indications. The Product shall not be promoted by Exagen for any other indication outside of Rheumatology, specifically but not limited to ulcerative colitis.

1.1.4. Any requests made to Exagen or any of its sales representatives for information regarding the Product that is outside of the Permitted Indications shall be referred by Exagen to JBI in accordance with instructions provided by JBI.

1.1.5. In connection with its Promotional Activities, Exagen will cause its sales representatives to: (a) utilize only the promotional materials provided by JBI (the "**Promotional Materials**"), and not utilize any other promotional, advertising communications or other materials relating to or referring to the Product, (b) not create, modify, change or alter the Promotional Materials in any way, and (c) make no claims, statements or representations to any third party (including any health care professional) regarding the Product other than those claims, statements or representations set forth in the Promotional Materials or as otherwise authorized by JBI in writing.

1.1.6. Exagen will promptly notify JBI of all inquiries related to the Product, including medical information requests, technical inquiries, product complaints, safety or compliance issues, clinical trial requests, billing issues, and adverse events. The Parties shall agree on protocols for transmitting such inquiries, complaints and reports, in a manner consistent with existing JBI procedures.

1.1.7. Exagen will be solely responsible for providing and maintaining the CRM system utilized by the sales representatives.

1.2. Dependencies. Exagen shall be excused from its obligation to perform any Services or other obligations under this Agreement, and shall not be liable for breach of any of its representations, warranties or covenants, to the extent JBI's failure to perform its obligations hereunder hinders or prevents Exagen's performance of such Services or obligations, or results in such breach.

1.3. Changes to Services. No changes shall be made to the scope of the Services without a written amendment to this Agreement signed by both parties.

1.4. Exclusivity. During the Term of the Agreement, Exagen shall be the only non-JBI organization granted the right to directly promote with a field sales force the Product for the Permitted Indications in the United States of America.

1.5. Exagen Personnel.

1.5.1. Exagen's personnel shall complete JBI assigned training on JBI's standard operating procedures, policies, systems and requirements in a timely manner. Each party shall bear their own costs associated with such training.

1.5.2. Exagen shall be legally responsible and liable for the actions, omissions and conduct of all sales representatives promoting the Product under this Agreement. Exagen shall notify JBI in writing promptly if any third party (including any governmental authority) notifies Exagen in writing that either Party's activities with respect to the Product are not in compliance with applicable law.

1.5.3. Exagen shall be retained, and shall perform its obligations hereunder, strictly as an independent contractor. No Exagen sales representative shall be an employee of JBI for any purpose. Exagen will ensure that it has employment agreements with each of its sales representatives and that all management of its sales representatives shall be by Exagen and not by or on behalf of any other party.

1.5.4. Exagen shall be solely responsible for any compensation that is payable to the Exagen sales representatives. Exagen warrants that its compensation program for its sales representatives will not provide financial incentives for the promotion, sales or marketing of the Product in violation of applicable laws.

1.5.5. Exagen will provide JBI with the opportunity to review on an annual basis the compensation program and bonus plan applicable to the Promotional Activities conducted by its sales representatives and shall update JBI if material changes are made to such program during the year.

1.5.6. Exagen will provide JBI with reasonable notice prior to making any material changes to the size of its sales team performing Promotional Activities under this Agreement if such changes would have a materially negative impact on the Services.

1.6. JBI Premises. While on JBI's or its affiliates' premises, Exagen shall comply with all rules and regulations of JBI and those applicable to the premises. Exagen shall be responsible for its personnel and agents while on such Premises whether or not any actions fall outside the scope of employment or engagement. JBI or its affiliates may search Exagen's personnel and agents, including their packages, and vehicles while entering, on, or leaving the premises. JBI may also search any packages of Exagen's personnel and agents at any time while on, leaving or entering JBI's the premises.

1.7. Materials and Equipment. Upon JBI's request, Exagen shall promptly return to JBI all material and equipment provided by JBI to Exagen.

1.8. Trademarks. JBI hereby grants Exagen and its affiliates a non-exclusive, royalty free and limited license (without the right to grant sublicenses) to use the trademarks and copyrights as contained in the applicable Promotional Materials or other material provided hereunder or otherwise authorized or approved by JBI solely for purposes of performing the Services, which license shall terminate immediately upon the expiration or earlier termination of this Agreement for any reason.

1.9. Background Screening Requirements. Prior to Exagen personnel being provided ongoing access to JBI's or its affiliates' facilities or network and computing resources, Exagen shall, at its expense, perform or have performed reasonable background screenings, which shall be in accordance with applicable law, in order to verify the following: (a) no such personnel have any relevant (pursuant to EEOC or other similar guidelines) criminal convictions, (b) no such personnel are on a terrorist watch list (e.g., OFAC), and (c) no such personnel are included in any debarment or exclusion list (e.g., OIG, GSA, & FDA). Exagen shall, upon JBI's request, confirm to JBI in writing that the foregoing screening criteria are satisfied and that a reputable and well-established vendor conducted such screenings.

1.10. Responsibilities of JBI.

1.10.1. JBI shall provide the sales and marketing strategy for the Product and all related Promotional Materials;

1.10.2. JBI may, at its discretion, make Product samples available for use by Exagen sales representatives;

1.10.3. JBI shall be responsible for all clinical trials for the Product (including investigator-initiated trials, non-interventional studies and registries) and for providing any funding for any grants or CMEs related to the Product; and

1.10.4. JBI shall be solely responsible for accepting and filling purchase orders, billing and returns with respect to the Product, and for establishing and modifying the terms and conditions of sale of the Product, including the price at which the Product will be sold, whether the Product shall be subject to any discounts, and the distribution of the Product. Exagen and its sales representatives are not authorized to, and shall not, discuss or provide any price concessions on the Product or enter into any contracts with respect to the Product.

1.11. Responsibilities of Exagen.

1.11.1. When conducting the Promotional Activities Exagen shall at all times comply with all applicable laws and regulations related to its promotion and detailing of the Product, including but not limited to (i) the federal anti-kickback statute, (ii) the Stark Law, (iii) the Sunshine Law and (iv) all regulations and written directives of the FDA and of Medicaid, Medicare and all other federal healthcare programs.

1.11.2. Exagen shall be responsible for and have final decision-making authority regarding the conduct of Promotional Activities under this Agreement and the hiring, management and compensation of its sales representatives.

1.11.3. Exagen shall be responsible for the cost of all meals or other expenses incurred while providing services under this Agreement. Exagen shall be responsible for equipping its sales representative with computers, tablets or other equipment needed to perform the Promotional Activities.

1.12. Non-Compete. During the Term of the Agreement and for a period of 9 months following the Termination at any time of the Agreement, Exagen shall not sell or promote any [***] without first obtaining the written consent of JBI.

2. TERM AND TERMINATION

2.1. Term of Agreement. The initial term of the agreement shall be from the Effective Date through June 30, 2020. Upon 180 days written notice prior to the end of the initial term, Exagen may, at its option, extend the Term of the Agreement for an additional 18 months (such initial term and extension terms, collectively, the "**Term**").

2.2. Termination of Agreement without Cause.

2.2.1. JBI can terminate the Agreement at any time without cause; provided, that it has provided Exagen with at least 30 days prior written notice. In the event of Termination of the Agreement by JBI without cause, JBI shall pay Exagen a final Promotion Fee calculated based on measured unit growth of SIMPONI over a Baseline TRxU in the Territory during the 3 months following Termination.

2.2.2. Exagen can terminate the Agreement without cause at the end of any calendar quarter; provided, that it has provided JBI with at least 30 days prior written notice.

2.3. Termination for Cause. JBI or Exagen may terminate this Agreement if the other party is in default of any of its material obligations hereunder and such default is not cured within 10 days after written notice thereof to such party by the party seeking termination; provided, however, there is no cure period for a default that: (a) is the result of gross negligence or willful misconduct; (b) in the reasonable opinion of the party seeking termination, cannot reasonably be cured; or (c) results in irreparable or continuing harm to the party seeking termination.

2.4. Effect of Termination. In the event of any termination or expiration, Exagen shall cease all Services under this Agreement after receipt of written notice from JBI unless such notice expressly provides otherwise and shall cooperate to provide a smooth transition. Within 5 days from the effective date of termination or expiration, Exagen shall provide to JBI all material, including all Promotional Materials, and equipment provided by JBI to Exagen, including any work-in-progress and all full and partial copies thereof. Except where JBI terminates for cause: (a) upon termination or expiration JBI shall pay for all Services performed and all non-cancellable expenses incurred in accordance with this Agreement prior to the effective date of termination and (b) Exagen shall submit a corresponding invoice to JBI within 30 days from the effective date of termination.

3. PROMOTION FEE AND PAYMENT

3.1. Promotion Fee. The Promotion Fee for the Services rendered under this Agreement is set forth in Exhibit A. JBI shall not be required to reimburse Exagen for any expenses or pass through costs unless approved in writing, in advance by JBI.

3.2. Invoicing and Payment. Subject to the terms set forth Exhibit A, Exagen shall submit all invoices by completing the on-line form on the web site located at www.ap.jnj.com. Exagen shall include on all invoices (a) a reference to this Agreement (b) a description of the Services, (c) the price, (d) the purchase order number, (e) expenses and pass-through costs, and (f) sales or use taxes, if applicable. Exagen shall not send any invoices, and no claim from Exagen for payment will be allowed, prior to JBI issuing a purchase order to Exagen. Payment terms will be net 90 days after JBI's receipt of an undisputed invoice from Exagen, provided however, the actual payment to Exagen from JBI or its designee will not be made until the next

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scheduled payment run as set forth at www.ap.jnj.com. Refer to Exhibit A for details on payment process. JBI shall not be obligated to pay any amounts not properly invoiced within 90 days after Services are provided, including any pass-through expenses or taxes that otherwise would have been reimbursable in accordance with this Agreement.

4. REPRESENTATIONS AND WARRANTIES

4.1. Exagen represents and warrants that:

4.1.1. Services will be performed in accordance with and conform to this Agreement and any applicable industry standards and practices;

4.1.2. Services will be provided by qualified personnel, suitably skilled and trained in the performance of the Services and performed in a diligent and professional manner;

4.1.3. Exagen shall comply with, and the Services will be in compliance with, all applicable law, statutes, ordinances and regulations, and Exagen shall have any required permits, licenses and certifications applicable to the Services;

4.1.4. Exagen (a) has the full right, power and authority to enter into this Agreement without the consent of a third party, and (b) is under no obligation to any third party, nor will it enter into any obligation with a third party, that could interfere with the Services;

4.1.5. Neither Exagen, nor its personnel or agents providing the Services, is subject to exclusion from a health care program as outlined in Sections 1128 and 1156 of the Social Security Act or debarment by the U.S. Food and Drug Administration under 21 U.S.C. 335a or any other federal or state program or law that would preclude Exagen or its personnel or agents from providing or contracting for the Services. If Exagen or its personnel or agents providing the Services fails to satisfy any requirements set forth in this paragraph, Exagen shall notify JBI in writing within 10 days of any such change in status, and upon receipt of such notice, JBI shall have the right to terminate this Agreement;

4.1.6. In performing under this Agreement, Exagen agrees to adhere to the Johnson & Johnson Responsibility Standards for Exagen (posted on JNJ.com: Responsibility Standards for Exagen; https://www.jnj.com/partners/responsibility-standards-for-Exagens);

4.1.7. Exagen shall comply with Exhibit B (Protection of Personal Information); and

4.1.8. Exagen shall comply with Exhibit C (Data Safeguards);

4.1.9. Exagen shall comply with Exhibit D (Compliance with Anti-Corruption Laws);

4.1.10. Exagen shall comply with Exhibit E (Health Care Compliance); and

4.1.11. Exagen shall comply with Exhibit H (Reporting Adverse Events, Special Situations, and Product Quality Complaints).

4.2. JBI represents and warrants that:

4.2.1. JBI holds, and shall maintain during the Term, all material registrations, licenses, authorizations and approvals from any applicable regulatory authorities as are necessary to sell the Product in the Territory in compliance with all applicable laws.

4.2.2. The Promotional Materials and JBI-provided training materials provided in connection with this Agreement do not and will not during the Term violate applicable law; and

4.2.3. as of the Effective Date, JBI is not aware of any claim alleging that the manufacture, packaging, distribution, sale or use of the Product in the Territory, or that the use of any registered trademark or registered copyright within the Product infringes or misappropriates the intellectual property rights or other rights of any third party, and to the knowledge of JBI, the manufacture, packaging, distribution, sale or use of the Product in the Territory and the use of any registered trademark or registered copyright within the Product in the Territory does not infringe or misappropriate the intellectual property rights or other rights of any third party.

5. CONFIDENTIAL INFORMATION; INTELLECTUAL PROPERTY RIGHTS

5.1. Definition of Confidential Information. As used herein, "**Confidential Information**" includes all information given to one party (the "**Receiving Party**") or its affiliates by the other party or its affiliates (the "**Disclosing Party**") or otherwise acquired by the Receiving Party or its affiliates, in connection with this Agreement, and all information derived or generated therefrom, including (a) information regarding any of the products of the Disclosing Party or any of its affiliates, (b) information regarding costs, productivity or technological advances and (c) the terms of this Agreement and any other information in connection therewith, but excluding the Promotional Materials and any other information provided by JBI to Exagen or its affiliates that is intended to be disclosed in the course of the Services. The results of and any information arising from any audit under Article 14 or Exhibit H, Section 5 shall be deemed the Confidential Information of Exagen.

5.2. Exceptions. The Receiving Party has no obligation to protect the following categories of Disclosing Party information: (a) information that is or was independently developed by the Receiving Party without use of or reference to any of the Disclosing Party's Confidential Information; (b) information that is or was lawfully received from a third party without any obligation of confidentiality and restriction on use; or (c) information that becomes or was a part of the public domain through no breach of this Article 5 (Confidential Information; Intellectual Property Rights) by the Receiving Party.

5.3. Restrictions on Use and Disclosure. The Receiving Party shall not, except as otherwise provided below (a) use or reproduce the Disclosing Party's Confidential Information for any purpose other than as required to perform the obligations or exercise the rights granted in connection with this Agreement or (b) disclose the Disclosing Party's Confidential Information to any third party, without the prior written approval of the Disclosing Party, except to personnel, consultants, agents and representatives of the Receiving Party or its affiliates who have a need to know such information in connection with the Services and who are bound by obligations of confidentiality and limited use at least as strict as those set forth herein; provided the Receiving Party shall be responsible for any actions of such parties that would be in breach of this Agreement if done by the Receiving Party. Notwithstanding the foregoing, the Receiving Party may disclose the Disclosing Party's Confidential Information to the extent such information is required to be disclosed by law, including a subpoena, or to respond to a regulatory request; provided that the Receiving Party promptly notifies the Disclosing Party in writing prior to any disclosure to allow the Disclosing Party to seek a protective order or similar relief in the Disclosing Party's sole discretion.

5.4. Protection of Confidential Information. The Receiving Party shall (a) use at least the same degree of care that the Receiving Party uses to protect its own proprietary information of a similar nature and value, but no less than reasonable care to protect and maintain the Disclosing Party's Confidential Information and (b) upon termination or expiration of this Agreement or as requested by the Disclosing Party, return or destroy all of the Disclosing Party's Confidential Information in the Receiving Party's possession or control. Nothing in this Section 5.4 (Protection of Confidential Information) shall require the destruction or alteration of computer back-up tapes or similar storage made in the ordinary course of the Receiving Party's business that contain the Disclosing Party's Confidential Information, provided that Receiving Party shall continue to comply with its obligations herein with respect to such Confidential Information.

5.5. Ownership of Confidential Information. The Receiving Party acknowledges that, except as otherwise provided below, (a) the Disclosing Party is the exclusive owner of and has all rights to its Confidential Information, including all intellectual property rights therein, such as patents, copyrights, trade secrets, trademarks, moral rights and similar rights of any type under the laws of any governmental authority (collectively, "**Intellectual Property Rights**") and (b) no right, title, interest or license to the Receiving Party is either granted or implied under any Intellectual Property Rights by the disclosure of Confidential Information hereunder, except for the limited right to use such Confidential Information for the purpose described in Section 5.3.

5.6. Equitable Remedies. Each of the parties hereto acknowledges that a breach of any of the provisions of this Article 5 (Confidential Information) could have a material and adverse effect upon the other party, that damages arising from such breach may be difficult to ascertain and, without limiting any other right or remedy, equitable relief, including injunctions and specific performance, shall be available without bond or other requirement.

5.7. No Publicity. i) Neither party may originate any publicity, news release, technical article, advertising or other announcement, written or oral, whether made to the public press or others, relating to performance under this Agreement or the existence of this Agreement between the parties, except where required by law. Nothing in this Agreement shall prohibit either Party from making any disclosure related to this Agreement that is required by applicable law or the regulations or policies of a national securities exchange or other similar regulatory body; provided that with respect to such required disclosures, the party required to do so shall always (a) consult with the other party in connection with said disclosure a reasonable amount of time prior to such disclosure to allow the other party to comment thereon and to prevent or limit such disclosure, if so permitted by law or regulatory requirement; and (b) promptly provide the other party with a copy of the disclosure and all materials relating thereto. ii) Without limiting the foregoing, except as expressly provided herein, neither party may use the names, logos or trademarks of the other party or its affiliates for any advertising or promotional purposes without the written consent of the other party.

6. INDEMNIFICATION

6.1. Indemnity Obligations.

6.1.1. Exagen. Exagen shall indemnify and hold harmless JBI, its affiliates and their respective directors, officers, employees and agents, and successors and permitted assigns thereof (each, in such capacity, a "**JBI Indemnitee**"), against any and all third party claims and resulting liabilities, damages, losses and expenses, including reasonable attorneys' fees, arising out of: (a) negligence or willful misconduct of any Exagen Indemnitee in connection with this Agreement or (b) a breach of this Agreement by any Exagen Indemnitee; provided, however, that Exagen shall not be required to indemnify, hold harmless or defend any JBI Indemnitee against any claim to the extent that JBI has an obligation to indemnify an Exagen Indemnitee under Section 6.1.2.

6.1.2. JBI. JBI shall indemnify and hold harmless Exagen, its affiliates and their respective directors, officers, employees and agents, and successors and permitted assigns thereof (each, in such capacity, a "**Exagen Indemnitee**"), against any and all third party claims and resulting liabilities, damages, losses and expenses, including reasonable attorneys' fees, arising out of the following: (a) negligence or willful misconduct by any JBI Indemnitee in connection with this Agreement; (b) a breach of this Agreement by any JBI Indemnitee; (d) the use by any Exagen Indemnitee of the Promotional Materials provided by JBI under this Agreement; or (e) personal injury arising out of or resulting from use of the Product; provided, however, that JBI shall not be required to indemnify, hold harmless or defend any Exagen Indemnitee against any claim to the extent that Exagen has an obligation to indemnify an JBI Indemnitee under Section 6.1.1.

6.2. Indemnity Procedures. The party seeking indemnification hereunder (the "**Indemnified Party**") will give the other Party to this Agreement (the "**Indemnifying Party**") prompt written notice of any matter upon which the Indemnified Parties intend to base a claim. With respect to the settlement of any claim relating solely to the payment of money damages, which could not result in the Indemnified Parties becoming subject to injunctive or other equitable relief or otherwise adversely affect the business of the Indemnified Parties in any manner, and as to which the Indemnifying Party has acknowledged in writing its obligation to indemnify the Indemnified Parties hereunder, the Indemnifying Party shall have the sole right to settle or otherwise dispose of such claim, on such terms as the Indemnifying Party shall deem appropriate, provided that Indemnifying Party shall provide reasonable evidence of its ability to pay any damages claimed and, with respect to any such settlement, shall have obtained the written release of the Indemnified Parties from the claim. The Indemnified Parties may participate in such negotiations to protect its interests and the Indemnifying Party will provide reasonable assistance to the Indemnified Parties and their counsel at no charge. With respect to the settlement of any claim not relating solely to the payment of money damages, the Indemnifying Party will have the right to consent to the entry of judgment with respect to, or otherwise settle, a claim only with the prior written consent of the Indemnified Parties, which consent will not be unreasonably withheld, provided, however, that the Indemnified Parties may withhold consent if any such judgment or settlement imposes an unreimbursed monetary or continuing non-monetary obligation on such Indemnified Parties or does not include an unconditional release of the Indemnified Parties from all liability with respect to the claim.

7. LIMITATION OF LIABILITY

IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER FOR ANY PUNITIVE, EXEMPLARY, MULTIPLIED, INDIRECT OR CONSEQUENTIAL DAMAGES, LOST PROFITS OR REVENUES OR ANY CLAIM FOR ANY PREJUDGMENT INTEREST; PROVIDED THAT THE FOREGOING LIMITATIONS DO NOT APPLY TO (a) ANY BREACH OF ARTICLE 5 (CONFIDENTIAL INFORMATION) OR (b) INDEMNIFICATION OBLIGATIONS PURSUANT TO ARTICLE 6 (INDEMNIFICATION).

8. INSURANCE

Exagen shall maintain in full force and effect valid and collectible insurance policies in connection with its activities as contemplated hereby, in compliance with Exhibit F (Insurance Requirements) attached hereto.

9. GOVERNING LAW; DISPUTE RESOLUTION

9.1. Governing Law. This Agreement is governed by and will be construed in accordance with the laws of the State of New York, excluding any conflicts of law provisions. If the Uniform Computer Information Transaction Act (UCITA), any version thereof or a substantially similar law is enacted as to be applicable to a party's performance under this Agreement, said statute will not govern any aspect of this Agreement, including without limitation, any of the parties' rights and obligations arising pursuant to this Agreement.

9.2. Dispute Resolution. Except as set forth in Section 17.1.3, and dispute, controversy or claim arising out of or related to this Agreement, or the interpretation, application, breach, termination or validity thereof, including any claim of inducement by fraud or otherwise, will be resolved in accordance with Exhibit G (Dispute Resolution) attached hereto.

10. RELATIONSHIP OF THE PARTIES

The relationship of the parties established by this Agreement is that of independent contractors and nothing contained herein will be construed to (a) give either party any right or authority to create or assume any obligation of any kind on behalf of the other party or (b) constitute the parties as partners, joint ventures, co-owners or

otherwise as participants in a joint or common undertaking. This Agreement constitutes a contract for the provision of Services and not a contract of employment of Exagen or any Exagen personnel.

11. FORCE MAJEURE

If any party is affected by any event beyond its reasonable control, including (a) fire, explosion, flood or other act of God, (b) acts, regulations or laws of any government, (c) war, terrorist acts or civil commotion or (d) failure of public utilities or common carriers (a "**Force Majeure Event**"), such party shall not be liable in connection with this Agreement to the extent affected by such Force Majeure Event; provided such party gives prompt written notice to the other party (the "**Non-Force Majeure Party**") of the Force Majeure Event and such affected party exercises all reasonable efforts to eliminate the effects of the Force Majeure Event on this Agreement as soon as possible. If any Force Majeure Event continues for a period longer than 30 days, the Non-Force Majeure Party may terminate this Agreement upon written notice to the other party.

12. SUBCONTRACTORS

Exagen shall not have the right to sublicense any Promotional Activities under this Agreement without the express written consent of JBI.

13. ASSIGNMENT

Exagen shall not assign this Agreement without the prior written consent of JBI and any attempt to do so will be void. This Agreement is intended solely for the benefit of the parties hereto, and it is not the intention of the parties to confer third-party beneficiary rights upon any other person or entity. Subject to the foregoing, this Agreement will bind and inure to the benefit of the parties hereto and their respective successors and permitted assigns.

14. AUDIT

Each Party or an authorized representative thereof, and any governmental agency which regulates a Party, may, at all reasonable times during the Term and for 3 years thereafter and upon reasonable notice to the other Party, inspect and audit the books and records of the other Party with respect to amounts payable hereunder or the other Party's obligations hereunder for the sole purpose of evaluating the other Party's compliance with this Agreement and any law, regulation or policy applicable to the Party being audited. Each Party shall retain all applicable books and records for 3 years subsequent to the expiration or termination of this Agreement or such longer period as required by applicable local or international regulatory requirements. Each Party shall respond within 1 business day of receipt of the other Party's request with information and documentation required in relation to an FDA or other regulatory authority inspection. The cost of any such audit shall be borne by the auditing Party, unless (a) with respect to an audit of payments made hereunder, the audit reveals that the audited Party has underpaid by five percent (5%) or more, or (b) with respect to an audit of compliance with this Agreement or applicable law, regulation or policy, such audit reveals noncompliance by the audited Party with this Agreement or any applicable law, regulation or policy due to a failure by the audited Party that is not excused under this Agreement, in which case ((a) or (b)), the audited Party shall reimburse the auditing Party for any third party costs reasonably incurred in connection with the audit. If any such audit concludes that additional payments were owed or that excess payments were received during such period, the owing Party shall pay the additional payments or the receiving Party shall reimburse such excess payments within sixty (60) days after the date on which such audit is completed.

15. RECORDS MANAGEMENT

Records and Information Management ("RIM") Requirements

15.1. Files and Work Papers. Exagen shall maintain and manage all paper and electronic records, files, documents, work papers and other information in any form provided by JBI or generated pursuant to this Agreement (the "Files and Work Papers") (a) in accordance with JBI's records management policies (which may be changed by JBI from time to time and communicated to Exagen), including as set forth in "RIM Requirements" below, (b) separately from files generated, managed or maintained by Exagen under agreements with other customers, (c) as required by applicable statutes and regulations, and (d) as set out in any preservation request issued to the Exagen by JBI.

15.2. Preservation. Exagen shall comply promptly and fully with any request from JBI, for any reason, to preserve Files and Work Papers or to promptly deliver such materials to JBI. Steps to comply include, when requested by JBI, periodic meetings to identify and implement documented procedures to preserve or deliver such data. Files and Work Papers created or modified by Exagen in electronic format must be delivered to JBI in the same electronic format or as otherwise directed by JBI.

15.3. Third Party Requests. Upon receipt from third parties of any request, demand, notice, subpoena, order, or other legal information-request ("Third-Party Request") for any Files and Work Papers, Exagen shall take all reasonable steps to protect JBI's legal rights in any response and, to the extent that Exagen legally may do so, shall immediately notify JBI, shall provide JBI with a copy of the Third-Party Request, and shall meet and cooperate with JBI in the implementation of procedures to comply with the request.

15.4. Destruction. Exagen shall not destroy any Files and Work Papers without first having received JBI's written confirmation that the Files and Work Papers are not pertinent to any pending preservation obligation or retention requirement.

15.5. RIM Requirements. This section specifies RIM requirements applicable to Exagen that create, maintain, manage or manipulate paper or electronic records, files, documents, work papers and other information in any form on behalf of JBI. Exagen is responsible for understanding and complying with JBI's RIM requirements.

a) Records and Information Management requirements shall be applied consistently and regularly.

b) JBI's Files and Work Papers

1. Shall be created, stored and managed throughout their lifecycle using proper protection.

2. Shall be protected and access controlled according to their value as described in the Johnson & Johnson Exagen Information Security Requirements.

3. Shall be retained in accordance with the Johnson & Johnson Enterprise Retention Schedule ("J&J ERS"). The J&J ERS defines retention requirements for business, legal, regulatory and privacy purposes.

4. Relevant to litigation or an investigation and subject to a Legal Hold shall be retained and preserved, regardless of the retention requirement set forth in the J&J ERS.

c) Exagen shall ensure that JBI's Files and Work Papers are retained upon the departure of personnel employed by the Exagen.

d) JBI or the applicable JBI Affiliate shall provide written approval prior to the disposition (disposal or deletion) of the JBI's Files and Work Papers.

e) Exagen with access to JBI's network shall annually complete Records and Information Management training as specified by JBI.

16. COMPLIANCE AND TRAINING

16.1. Exagen shall at all times cause its employees who promote or detail Product to health care professionals to comply with JBI's Compliance Program, including regarding (1) the promotion of pharmaceutical products, (2) adverse event reporting, (3) product samples, (4) data safeguards and (5) management of records in third party relationships.

16.2. Exagen shall provide general training to all of its employees, including on subjects such as general detailing skills, relevant aspects of applicable law and JBI policies.

16.3. Prior to the commencement of Promotional Activities under this Agreement, JBI shall provide training to Exagen employees engaged in performing Promotional Activities for the Product on the Rheumatology disease state, SIMPONI ®, competitive market knowledge, promotional sales messaging, Adverse Event Reporting, Sampling Policy, JBI CarePath and related programs, PhRMA, and J&J Compliance guidelines, Sunshine Act, Records Retention, Privacy Policy and any other training deemed necessary by JBI.

16.4. JBI shall have the right, upon reasonable prior notice, to confirm compliance by Exagen of all of the foregoing, including certification by each Exagen representative of his/her mastery of required subject matter.

a) Prior to the commencement by Exagen of any Promotional Activities under this Agreement, Exagen shall conduct a thorough gap analysis of its current compliance policies applicable to the promotion of diagnostic products and the compliance policies that it will be required to follow to promote a pharmaceutical product. Exagen shall ensure that its policies are modified or that alternate policies are in place to ensure that when Exagen is performing Promotional Activities for the Product that such activities comply at all times with the rules and regulations applicable to the promotion of a pharmaceutical product.

b) Prior to the commencement by Exagen of the Services, JBI shall have the right to audit the processes Exagen will use to ensure compliance by Exagen and its sales representatives with the law and regulations applicable to the promotion, marketing and sale of pharmaceutical products, and no Promotional Activities shall begin under this Agreement until JBI has completed such audit and Exagen has remedied any gaps to the satisfaction of JBI.

17. GOVERNANCE.

17.1. Within 90 days of the execution of the Agreement, the Parties shall create a joint working group consisting of equal number of members from each party (including 2 permanent members from each party) (the "Oversight Committee").

17.2. Once a calendar quarter, the Oversight Committee shall meet to discuss business and market performance, and strategic direction. The Oversight Committee shall have an advisory role and shall not have final decision-making authority.

17.3. The Oversight Committee shall be the first level dispute resolution in event of disagreement over the Promotion Fee.

18. <u>TAXES</u>

18.1. All fees charged by Exagen shall be exclusive of value added, sales, use, goods and services, transfer, services, consumption or transaction taxes ("**Indirect Taxes**"), as well as gross receipts, excise and other taxes. JBI shall make all payments of fees to Exagen under this Agreement without deduction or withholding for any tax, unless such deduction or withholding is required by law. Each party shall be responsible for: taxes based on its own income ("**Income Taxes**"); gross receipts, capital stock, and net worth taxes;

franchise and privilege taxes on its business; employment taxes of its employees; and taxes on any property it owns or leases. Exagen shall not pass on to JBI and JBI shall not be responsible for any taxes that Exagen incurs in subcontracting the performance of the Services except to the extent such taxes are included in the pricing set forth in this Agreement. JBI and Exagen will reasonably cooperate with each other to more accurately determine a party's tax liability and to minimize such liability, to the extent legally permissible.

18.2. In the event applicable law requires JBI to withhold any Income Taxes from any payments made to Exagen, then JBI shall withhold such Income Taxes, pay the full amount withheld to the relevant taxing authority, and provide Exagen with proof of such payment. Any such Income Tax required to be withheld shall be an expense of and borne by Exagen and any amounts paid, deducted or withheld by JBI shall be treated for all purposes of this Agreement as paid to Exagen.

18.3. Exagen may charge JBI for Indirect Taxes, as long as the amount of Indirect Taxes are specified in a valid invoice compliant with applicable law. JBI shall either pay such invoiced amount or supply valid exemption documentation. If Exagen does not provide JBI with a valid invoice (including separate identification of Indirect Taxes where required by applicable law), Exagen shall assume responsibility for such non-compliance, including payment of any tax-related interest and penalties. Exagen shall segregate on the invoice fees for taxable Services from fees for nontaxable Services.

19. HEADINGS

The headings used herein have been inserted for convenience only and do not affect the interpretation of this Agreement.

20. WAIVER

The failure of any party to enforce at any time for any period any provision hereof will not be construed to be a waiver of such provision or of the right of such party thereafter to enforce each such provision, nor shall any single or partial exercise of any right or remedy hereunder preclude any other or further exercise thereof or the exercise of any other right or remedy.

21. SEVERABILITY

Any provision of this Agreement that is invalid or unenforceable in any jurisdiction will, to the extent the economic benefits conferred thereby to both Parties remain substantially unimpaired, be ineffective to the extent of such invalidity or unenforceability without rendering invalid or unenforceable the remaining provisions or affecting the validity or enforceability of any of such provisions in any other jurisdiction.

22. NOTICES

To be effective, all notices hereunder must be in writing and delivered personally or by overnight courier, billed to sender or by certified or registered US mail, return receipt requested, postage prepaid, to all the Parties at the following addresses:

Exagen:

Exagen Diagnostics Inc.
Attn: Chief Financial Officer
1261 Liberty Way
Suite C
Vista, CA 92081
USA

JBI:

Janssen Biotech, Inc.
Attn: Joanne Grace
800 Ridgeview Drive
Horsham, PA 19044
USA

With a copy to:

Janssen Biotech, Inc

Attn: Board Attorney

800 Ridgeview Drive

Horsham, PA 19044

or to such other place as a party may designate by written notice to the others.

23. ADVERSE EVENT AND PRODUCT QUALITY COMPLAINT REPORTING

Exagen shall implement and manage procedures to include an efficient and timely Adverse Event ("**AE**"), Serious Adverse Events ("**SAE**") and Product Quality Complaint ("**PQC**") reporting process, as approved by JBI. Exagen shall perform reporting of AEs, SAEs and PQCs in accordance with Exhibit H Reporting Adverse Events, Special Situations, and Product Quality Complaints attached hereto.

24. ENTIRE AGREEMENT; CONFLICTS

24.1. Entire Agreement. This Agreement (a) supersedes all previous understandings, agreements and representations between the parties, written or oral and (b) constitutes the entire agreement and understanding between the parties with respect to the subject matter hereof, and incorporates all representations, warranties, covenants, commitments and understandings on which they have relied in entering into this Agreement. No modification, change or amendment to this Agreement shall be effective unless in writing and signed by each of the parties.

24.2. Conflicts. No terms and conditions of any purchase order or provision included in any invoice, estimate, confirmation, acceptance or any other similar document in connection with this Agreement will be effective unless expressly stated otherwise in a writing signed by each of the parties. Any additional provisions in accordance with the foregoing shall expressly be subject to this Agreement. To the extent of any conflict or inconsistency between this Agreement and such provisions, this Agreement shall govern, unless such writing includes the section number of this Agreement that the parties agree no longer governs or is modified for the matter covered thereby.

25. SURVIVAL

The following sections survive any termination or expiration of this Agreement: 2.4, 3.2, 5-10, 14, 15, and 25 and any other provisions that by their nature and context are intended to survive.

26. COUNTERPARTS; ELECTRONIC SIGNATURES

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, and all such counterparts together shall constitute one and the same instrument. Electronically executed or electronically transmitted (including via fax) signatures shall have the full force and effect of original signatures.

27. REMEDIES

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

Subject to Articles 9 (Governing Law; Dispute Resolution) and 7 (Limitation of Liability), any remedies provided herein are cumulative and not exclusive of any remedies provided by law or equity.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives.

Janssen Biotech, Inc.
/s/ Brian Smith
Name: Brian Smith
Title: Director of Marketing
Date: Dec 7, 2018

Exagen Diagnostics Inc.
/s/ Ron Rocca
Name: Ron Rocca
Title: CEO
Date: Dec 6, 2018

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

EXHIBIT A

1. The project managers are:

Exagen Contact Information:
[Name]
[Title]
[Address]
[Telephone #]
[Email]

JBI Contact Information:
[Name]
[Title]
[Address]
[Telephone #]
[Email]

2. **Pricing**:

a. JBI will pay Exagen quarterly in arrears a Promotion Fee based on measured unit growth of SIMPONI over a Baseline TRxU in the Territory. TRxU means Total Prescribed (Rx) Units.

b. The Baseline TRxU for 2019 and first half of 2020 is set forth below.

c. "Promotion Fee Income" is defined as the total number of incremental Rx units written above the established Baseline TRxU for the defined universe during the Measurement Period, multiplied by the agreed upon Promotion Fee per Rx Unit.

For the Quantities	Promotion Fee per Incremental Rx Unit
[***]	**$[***]**
[***]	**$[***]**
[***]	**$[***]**

SIMPONI TRxU growth shall be monitored on a monthly basis. Payouts will be calculated and made to Exagen on a Quarterly schedule in arrears.

A sample calculation of a quarterly Promotion Fee is set forth below in Section (A)(2).

Estimated Promotion Fee

Exagen will prepare an estimated Promotion Fee earned by Exagen on a calendar quarter basis, starting with the end of the first full calendar quarter following the actual start of the Measurement Period. Such estimated Promotion Fee will be accompanied by an invoice for the Promotion Fee due Exagen, to be paid based on Net 90 day payment terms set forth in Section 3.2. Exagen invoice will be submitted to JBI within 10 calendar days of the end of the quarter.

*** Certain material (indicated by an asterisk) has been omitted from this document pursuant to a request for Confidential Treatment. The omitted material has been filed separately with the Securities and Exchange Commission.

True-up Process

JBI shall provide Exagen with a quarterly reconciliation of the estimated Promotion Fee earned by Exagen. Any amount due back to either JBI or Exagen will be included in (and may be netted against) the next invoice.

Territory

The final Territory will be comprised of zip codes in which Exagen sales representatives are deployed.

The Territory may be revised prior to the beginning of each quarter in such cases as Exagen adds or removes zip codes from sales rep coverage. A current "zip to terr" file should be provided to JBI to substantiate quarterly zip code coverage in the event changes are made.

Measurement

An estimated Baseline TRxU through June 30, 2020 is set forth in Section (A)(1)[1] below and shall be updated by JBI no later than December 15, 2018 based on actual sales, trends and market considerations. Should the Agreement be extended, the Baseline TRxU for the time period after June 30, 2020 will be determined by JBI no later than June 30, 2020 based on actual sales, trends and market considerations.

Adjustment of Baseline TRxU

The Baseline TRxU may be adjusted quarterly in the event zip codes are added or removed from Exagen's deployment.

Should there be a change in SIMPONI® formulary access in any of the following plans, the Baseline TRxU would be recalculated to adjust historical volume from the affected plan(s):

- **[***]**
- **[***]**
- **[***]**
- **[***]**
- **[***]**
- **[***]**
- **[***]**

Exclusions

Rx units fulfilled as free goods shall not be credited towards growth over Baseline TRxU, unless specifically agreed to by JBI and Exagen. Units provided to HCPs as product samples shall not be credited towards growth over Baseline TRxU.

Data Source used for Measurement

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1 NTD: Baseline forecast to be provided through Q2 2020.

*** Certain material (indicated by an asterisk) has been omitted from this document pursuant to a request for Confidential Treatment. The omitted material has been filed separately with the Securities and Exchange Commission.

JBI will provide Exagen with access (and if necessary a license) to TRxU data. The data, provided by iQVIA and supplemented with data from select Specialty Pharmacy Providers and to which JBI will also have access (the "TRxU Data"), will be provided to Exagen by JBI at no cost to Exagen through a Third-Party Agreement ("TPA"). The data will show the TRxU's written in the Territory.

Exagen may use this data to populate internal CRM reports to provide HCP-level TRx volume and trends for their sales representatives.

Using this same data, Exagen will calculate monthly and quarterly reports, for the Territory, of the estimated TRxU growth, which JBI will then verify.

(A)(1) Baseline Forecast 2018 and 2019

[***]

[***]

*** Certain material (indicated by an asterisk) has been omitted from this document pursuant to a request for Confidential Treatment. The omitted material has been filed separately with the Securities and Exchange Commission.

(A)(2) Sample Promotion Fee Calculation

[***]

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(A)(3) Targeted Specialties

- Core specialties for Exagen HCP Sales Targets:
  - [***]

[***]
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(A)(4) Do Not Target Specialties

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EXHIBIT B – PROTECTION OF PERSONAL INFORMATION[1]

1. Definitions

1.1. "**Personal Information**" means data that identifies, can be used to identify, or relates to an identifiable individual.

1.2. "**Privacy Breach**" means any unauthorized access, acquisition, use, alteration disclosure, loss or destruction of, or damage to, Personal Information, or any breach of applicable privacy or data protection law or of this Agreement with respect to the Processing of Personal Information by Exagen.

1.3. "**Process**", "**Processed**", and "**Processing**" means the collection, possession, use, disclosure, transfer, storage, deletion, combination, access or other use of Personal Information as contemplated by applicable privacy and data protection laws.

2. B.Personal Information Privacy & Data Protection

2.1. In connection with the Processing of Personal Information that is received or accessed by Exagen from JBI or its affiliates, or from their employees, representatives or contractors, or others on behalf of JBI or its affiliates, Exagen shall, and shall ensure that any person engaging in the Processing of Personal Information on its behalf in connection with this Agreement will, comply with this Exhibit.

2.2. Exagen shall Process Personal Information only to perform its obligations under this Agreement or as otherwise instructed by JBI in writing from time to time. Exagen's Processing of Personal Information shall be governed by the terms of the Agreement, which sets out the subject matter, duration, nature, and purpose of the Processing, types of Personal Information, categories of data subjects, and obligations and rights of JBI. Exagen shall Process Personal Information in accordance with all applicable data privacy and data protection laws, and applicable policies and standards including, to the extent required as part of Exagen's obligations under this Agreement, JBI's Cookie Policy.

2.3. Exagen shall ensure that Personal Information is not disclosed to, transferred to and/or allowed to be accessed by or otherwise Processed by its employees or personnel in any country other than those set forth in this Agreement unless previously agreed to in writing by JBI. Exagen agrees to meet any additional regulatory or legal requirements necessary to allow such transfers. In the event that JBI allows Exagen to expand the list of countries to which the Personal Information may be transferred, Exagen agrees to cooperate with JBI in meeting any additional regulatory or legal requirements necessary to allow such transfers.

2.4. Exagen shall, to the extent required as part of Exagen's obligations under this Agreement, ensure that all Personal Information Processed by Exagen is accurate and, where required, kept up-to-date, and ensure that any Personal Information that is inaccurate or incomplete is erased or rectified in accordance with JBI's instructions, this Agreement or applicable law.

2.5. Exagen shall, unless specifically prohibited by applicable law, (i) promptly (and in any event within five days of receipt) notify JBI in writing if Exagen receives any requests, complaints or inquiries from an individual with respect to Personal Information Processed by Exagen including, opt-out requests, requests for access and/or rectification and allegations that the Processing infringes an individual's rights under applicable law and, (ii) not respond to any such requests, complaints or inquiries unless expressly authorized to do so by JBI.

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1 NTD: Subject to further review and discussion by the parties.

2.6. Exagen shall notify JBI in writing immediately (and in any event within twenty-four (24) hours) whenever Exagen reasonably believes that there has been any Privacy Breach. Such notice will provide detailed information regarding such Privacy Breach, including its nature and scope; actual or potential cause; any reports to law enforcement; and, measures being taken to investigate, correct, mitigate, and prevent future Privacy Breaches. Exagen will provide, at Exagen's sole cost, reasonable assistance and cooperation requested by JBI to investigate and notify affected individuals, regulatory bodies, or credit reporting agencies with respect to any such Privacy Breach. Exagen will also remediate and mitigate the effects of the Privacy Breach as JBI deems appropriate, including any notification that JBI or an applicable regulatory body may determine appropriate to send to individuals impacted or potentially impacted by the Privacy Breach and/or the provision of any credit reporting or other remedial service. Exagen shall not notify any individual or any third party of any Privacy Breach without JBI's prior consent except to the extent required by law and, in such case, Exagen shall promptly notify JBI of such requirement. In addition, within thirty (30) days of identifying or being informed of a Privacy Breach, Exagen shall develop and execute a plan, subject to JBI's approval, that reduces the likelihood of a recurrence of such Privacy Breach. Without limiting any other rights of JBI under this Agreement, JBI may at its discretion immediately terminate this Agreement as a result of a Privacy Breach without JBI having any financial or other liability of any nature whatsoever to Exagen resulting from such termination.

2.7. Exagen shall immediately cease Processing and promptly return, archive, or destroy Personal Information in its possession, in accordance with JBI's instructions, when no longer necessary to provide the Services to JBI, upon termination or expiration of this Agreement for any reason, or immediately upon JBI's request. When disposing of any paper, electronic or other record containing Personal Information (including Personal Information retained by Exagen for disaster recovery and data back-up), Exagen shall do so by taking all reasonable steps to destroy the information, such as by: (i) shredding; (ii) permanently erasing and deleting; (iii) degaussing; or, (iv) otherwise modifying the Personal Information in such records to make it unreadable, unreconstructable and indecipherable.

2.8. If Exagen is required by law or receives any order, demand, warrant or any other document requesting or purporting to compel the production of Personal Information (such as oral questions, interrogatories, requests for information or documents in legal proceedings, subpoenas, civil investigative demands or other similar processes), Exagen shall, except to the extent prohibited by law, immediately notify JBI and shall not produce the Personal Information for at least forty-eight (48) hours following such notice to JBI so that JBI may, at its own expense, exercise such rights as it may have under law to prevent or limit such disclosure. In addition to the foregoing, Exagen shall exercise commercially reasonable efforts to prevent and limit any such disclosure, to otherwise preserve the confidentiality of the Personal Information and shall cooperate with JBI with respect to any action taken with respect to such request, complaint, order or other document, including to obtain an appropriate protective order or other reliable assurance that confidential treatment will be accorded to the Personal Information.

2.9. At any time during the term of this Agreement, upon request and in a reasonable time and manner, Exagen shall make its policies, procedures, practices, and books and records relating to the privacy and security of Personal Information and the Processing of Personal Information available to JBI and/or its affiliates for review.

2.10. Exagen shall provide JBI and its affiliates and their representatives upon reasonable request with: (i) access to Exagen's premises and records; (ii) assistance and cooperation of Exagen's relevant staff; and (iii) facilities at Exagen's premises for the purpose of auditing Exagen's compliance with its obligations in this Exhibit. Upon notice to Exagen, Exagen shall assist and support JBI in the event of an investigation by any regulator, including a data protection regulator, if and to the extent that such investigation relates to Personal Information handled by Exagen for JBI. Such assistance shall be at JBI's expense, except where such investigation was required due to Exagen's acts or omissions, in which case such assistance shall be at Exagen's expense.

2.11. Upon JBI's request, Exagen shall enter into data transfer agreements with JBI and JBI's affiliates as needed to satisfy cross-border transfer obligations relating to Personal Information, such as the Standard Contractual Clauses issued by the European Commission or comply with another cross-border data transfer mechanism deemed compliant by the European Commission to allow Personal Information to be transferred to Exagen and any affiliate or subcontractor of Exagen by JBI or its affiliates.

2.12. Exagen shall take any other steps reasonably requested by JBI to assist JBI in complying with any notification, registration or other obligations applicable to JBI or its affiliates under laws relating to Processing Personal Information under this Agreement. In the event this Agreement, or any actions to be taken or contemplated to be taken in performance of this Agreement, do not or would not satisfy either party's obligations under such laws, the parties shall cooperate with each other and execute an appropriate amendment to this Agreement.

2.13. Notwithstanding anything to the contrary in this Agreement, JBI's affiliates are intended third-party beneficiaries of this Exhibit, shall be entitled to its benefits and shall be entitled to enforce this Exhibit as if each were a signatory hereto.

2.14. Exagen agrees to indemnify, defend and hold harmless JBI and its affiliates and their directors, employees, and agents from and against any and all claims and resulting damages, liabilities, expenses, fines and losses of any type, to the extent arising out of, or relating to the following: (i) Exagen's failure (or the failure of any personnel, contractor, or agent of Exagen) to comply with the obligations under this Exhibit; (ii) any Privacy Breach; and (iii) any negligence or willful misconduct by Exagen, its personnel, contractor or agents or any third party to whom Exagen provides access to Personal Information.

EXHIBIT C – DATA SAFEGUARDS

1. If Exagen possesses JBI information that is not publicly available, has access to JBI information or computing resources using Exagen's computing and network resources over a network-to-network connection, or hosts any JBI information on a Exagen-hosted, Internet-facing website or web application, it shall have in place and maintain an information security program that encompasses administrative, technical, and physical safeguards that meet or exceed the requirements specified in the current SISR (as defined in Section 6 of this Exhibit) and applicable industry standards to protect against threats both to the unauthorized or accidental destruction, loss, alteration, or use of, and the unauthorized disclosure or access to such JBI information.

2. If Exagen uses a Exagen computing resource to access the Internet in order to view or input JBI information that is not publicly available, provided that Exagen does not electronically or physically retain any JBI non-public information subsequent to such access, Exagen's obligation with respect thereto is limited to meeting or exceeding the Internet Access Only Requirements specified in the current SISR and any applicable industry standards reasonably intended to protect against threats both to the unauthorized or accidental destruction, loss, alteration, or use of, and the unauthorized disclosure or access to non-public information.

3. Exagen personnel who are provided ongoing access to JBI facilities and/or network and computing resources shall abide by all applicable Acceptable Use policies and complete the information security training approved by JBI. For such personnel, Exagen shall conduct background checks and/or other investigations deemed necessary, as appropriate and permitted by applicable law. Exagen personnel with direct, unrestricted access to the Johnson & Johnson Network ("**JJNET**") shall complete JBI's information security awareness training upon initial access to JJNET and annually thereafter. Exagen access or connectivity may be terminated at any time upon violation of policies and/or misuse or abuse of privileges.

4. If Exagen discovers or is notified of a breach or potential breach of security relating to JBI information that is not intended for public release, Exagen shall (a) notify JBI within 24 hours of such breach or potential breach and (b) if the applicable JBI information was in the possession of Exagen at the time of such breach or potential breach, Exagen shall (i) investigate and remediate the effects of the breach or potential breach and (ii) provide JBI with satisfactory assurance that such breach or potential breach will not reoccur.

5. No JBI information shall be sold, assigned, leased or otherwise disposed of to a third party by or for Exagen or commercially exploited by or on behalf of Exagen or its personnel without written direction from JBI.

6. "**SISR**" means the Johnson & Johnson Exagen Information Security Requirements in effect as of the Effective Date, a copy of which has been made available to Exagen, and as revised from time to time by JBI and made available to Exagen. Exagen shall have 30 days after receipt of a SISR revision from JBI to reject any new requirements contained therein. If Exagen rejects the revised SISR, JBI shall have the right to terminate this Agreement. If Exagen intends to implement a change to its systems, policies or procedures that would reduce the level of safeguards already in place, Exagen shall notify JBI and, upon JBI's approval, implement such change.

EXHIBIT D – COMPLIANCE WITH ANTI-CORRUPTION LAWS

Notwithstanding anything to the contrary in the Agreement Exagen hereby agrees that:

1. Exagen shall not perform any actions that are prohibited by local and other anti-corruption laws (collectively "Anti-Corruption Laws") that may be applicable to one or both parties to the Agreement;

2. Exagen shall not, directly or indirectly, make any payment, or offer or transfer anything of value, or agree or promise to make any payment or offer or transfer anything of value, to a government official or government employee, to any political party or any candidate for political office or to any other third party related to the transaction with the purpose of influencing decisions related to JBI and/or its business in a manner that would violate Anti-Corruption Laws;

3. Exagen shall not retain any government official or government employee in the performance of the Agreement unless it has been approved by JBI and, if necessary, by the competent authority or authorities and such government official's or employee's employer. Furthermore, Exagen shall immediately advise JBI in writing in the event Exagen becomes aware that any person engaged in the performance of the Agreement becomes a government official or employee, a political party official or a candidate for political office. The requirements of this subsection shall not apply with respect to employees of a Exagen that is a government owned entity;

4. Exagen shall designate an individual within its organization to receive training from JBI on Anti-Corruption Laws, as well as applicable rules on interactions with health care professionals, as mutually agreed to by the parties. Such designated individual shall then provide such training on Anti-Corruption Laws, using applicable training materials to be provided by JBI, on at least an annual basis to all persons employed by Exagen who perform work for JBI and interact with government officials or health care professionals in the normal course of their responsibilities. Upon JBI's and Exagen's mutual agreement, such training may also be provided directly by JBI to such employees of Exagen. Exagen shall also provide such training or training materials to any subcontractors it uses in the performance of the Agreement (to the extent the use of such subcontractors by Exagen is permitted under the Agreement.) Any training and materials provided by JBI does not relieve Exagen of any obligations it has independent of the Agreement and Exagen shall not rely on JBI's training and materials for any such obligations;

5. Exagen shall certify on an annual basis in a format to be provided by JBI that:

    a. training and training materials on Anti-Corruption Laws, as well as applicable rules on interactions with health care professionals, have been provided to all persons employed by Exagen who perform work for JBI and interact with government officials or health care professionals in the normal course of their responsibilities and that it has provided the JBI training and training materials to subcontractors used by Exagen in the performance of the Agreement;

    b. to the best of Exagen's knowledge, there have been no violations of Anti-Corruption Laws by Exagen or persons employed by or subcontractors used by Exagen in the performance of the Agreement;

    c. personnel of Exagen who may be designated as "Key Personnel" by mutual agreement of JBI and Exagen have not changed, except as noted in a schedule attached to the certification provided by Exagen;

    d. Exagen has made no changes in its use of subcontractors to perform the services for the JBI under the Agreement, except as (1) permitted under the Agreement and (2) noted in a schedule attached to the certification provided by Exagen; and

e. Exagen has maintained true and accurate records necessary to demonstrate compliance with the requirements of this Exhibit.

f. Exagen shall maintain and provide JBI and its auditors and other representatives with access to records (financial and otherwise) and supporting documentation related to the subject matter of the Agreement as may be requested by JBI in order to document or verify compliance with the provisions of this Exhibit; and

g. if Exagen fails to comply with any of the provisions of this Exhibit, such failure shall be deemed to be a material breach of the Agreement by Exagen and, upon any such failure, JBI shall have the right to terminate the Agreement with immediate effect upon written notice to Exagen without JBI having any financial liability or other liability of any nature resulting from any such termination.

EXHIBIT E – HEALTH CARE COMPLIANCE PROVISIONS

1. "Health Care Professional" or ""HCP"" is defined as (i) any person who is licensed by a state to provide health care services directly or indirectly to patients, such as a physician, a nurse, a technician, a psychologist, or a lab specialist and/or (ii) any person or organization to whom JBI markets its products and services that is in a position to influence the selection of the products furnished or purchased, including but not limited to hospitals and health systems, administrators, procurement personnel, group purchasing organizations, pharmacy benefit managers, and business people.

2. Exagen shall, with respect to each HCP engaged under this Agreement or any SOW:

   a. Ensure that the HCP's Services are provided in compliance with all applicable laws and regulations, including but not limited to laws and regulations pertaining to the promotion of products regulated by the United States Food and Drug Administration (FDA); laws, regulations and guidance pertaining to federal and state anti-kickback and submission of false claims to governmental or private health care payors (collectively, "Health Care Compliance" or "HCC"); state and federal laws and regulations relating to the protection of individual and patient privacy; and any other laws and regulations applicable to such services.

   b. Ensure that HCP's Services are provided in compliance with JBI's written policies and procedures of which Exagen is provided notice, including, but not limited to, policies and procedures related to FDA and Health Care Compliance and the protection of individual and patient privacy (collectively, "JBI Policies"). The requirements of this Agreement and any additional policies provided attached to this Agreement or the applicable SOW shall constitute JBI Policies of which JBI provides notice to Exagen.

   c. Execute a written agreement setting forth Services and compensation for such Services, prior to the HCP providing any Services pursuant to this Agreement or the applicable SOW. The parties shall include in each SOW a template agreement that Exagen shall use in engaging such HCPs. Exagen shall ensure that any payments made to HCPs do not exceed fair market value for Services provided by the HCP.

   d. Ensure that each HCP is:

      (i) not excluded from a Federal health care program as outlined in Sections 1128 and 1156 of the Social Security Act (see the Office of Inspector General of the Department of Health and Human Services List of Excluded Individuals/Entities at https://exclusions.oig.hhs.gov/;

      (ii) not debarred by the FDA under 21 U.S.C. 335a (see the FDA Office of Regulatory Affairs Debarment List at http://www.fda.gov/ICECI/EnforcementActions/FDADebarmentList/default.htm ;

      (iii) not otherwise excluded from contracting with the federal government (see the Excluded Parties Listing System at https://www.sam.gov/index.html/home##11 and

      (iv) for HCPs who are health care practitioners, duly licensed in the state where he or she is currently practicing.

      If an HCP fails to satisfy one or more of the requirements set forth in Section 2(d)(i) through (iv) above at any time during the term of this Agreement or the applicable SOW Exagen must notify JBI in writing within ten (10) days of any such change in status, and upon receipt of such notice, JBI shall have the right to terminate any applicable SOW.

e. Ensure that each HCP is qualified and authorized to provide Services as may be agreed to by Exagen and JBI in any applicable Work Order, or required by law or any applicable authority, including, but not limited to, any required ethics or other authorizations from federal, state or local government agencies for HCPs who are employees of such agencies; and

f. Compensate each HCP the fair market value for his/her services, based on Services provided, and in a manner that does not take into account the volume or value of any prescriptions, referrals or business generated among the parties.

g. Comply with professional and/or employment rules (such as conflicts of interest or ethics policies) established by Exagen or a professional organization or institution with which HCP is affiliated when the provision of Services by an HCP is subject to such rules, including, as applicable, obtaining any required approval(s) prior to providing Services and making any required reports.

3. Exagen shall provide notice to each HCP of the following:

The Physician Payments Transparency Requirements of the Patient Protection and Affordable Care Act of 2010 (codified at 42 U.S.C. 1320a-7h) and implementing regulations, require certain pharmaceutical, medical device, and other companies to annually report to the Centers for Medicare and Medicaid Services (CMS) certain information about payments and transfers of value provided directly or indirectly to U.S. physicians and teaching hospitals, which CMS will make publicly available. This includes any payments or transfers of value that JBI provides indirectly through Exagen to U.S. physicians and teaching hospitals. As required by law, JBI will report to CMS information about payments and transfers of value that Exagen provides to U.S. physicians and teaching hospitals pursuant to this Agreement. This includes any portion of any payment or transfer of value that JBI furnishes to Exagen which Exagen then provides directly or indirectly to U.S. physicians or teaching hospitals, including its employees, agents, or contractors. Information that JBI must report includes the identity and business address of each relevant U.S. physician or teaching hospital, the value and purpose of any payments or transfers of value that are furnished, and any other information as may be required by law. To enable JBI to comply with its legal obligations, Exagen shall track, maintain, and provide JBI information and data related to any payments or transfers of value that Exagen provides to U.S. physicians and teaching hospitals under this Agreement. Exagen shall provide such information and data in the form and manner that JBI requests in a timely manner. The JBI may also report information about compensation, payments or transfers of value that Exagen provides to U.S. physicians and teaching hospitals as otherwise required by law and the JBI reserves the right to post on a website accessible to the public such information, whether or not required by law.

4. In accordance with JBI’s request, Exagen shall, within thirty (30) days thereafter, provide or upload to JBI’s health care compliance data system (the ““Totality Third Party Exagen Portal””) or any similar system, all compliance documents and data templates related to Services. Data requirements regarding Totality Third Party Exagen Portal can be found at https://totalitygateway.jnj.com. Compliance documents and data templates include the following:

a. Copies of written agreements including compensation terms, with each HCP providing Services.

b. Documentation indicating that each HCP providing Services is not excluded or debarred and, for any health care practitioner, duly licensed under state law, as set forth above. Exagen shall obtain such documentation prior to engaging such HCP to provide Services.

c. Documentation of Services provided by such HCP (e.g., a written report, comments collected at a meeting, presentation materials, etc.).

d. HCP data templates capturing details on HCP value exchange. Value exchanges shall include, without limitation, any gifts, meals, compensation, travel reimbursement and patient-related materials provided to HCPs in connection with the SOW.

e. Documentation that shows that Exagen provided notice to each HCP that information provided pursuant to this Agreement may be made publicly available at any time at the sole discretion of JBI.

f. Electronic report of overall expenses paid to or on behalf of each HCP and electronic copies of all original receipts documenting such expenses; and

g. Written evidence of any required ethics or other authorizations allowing HCPs employed by federal, state or local government agencies, including but not limited to pharmacy and therapeutics committees, to provide Services under this Agreement.

5. In the event that JBI is charged any fee or penalty because Exagen failed to comply with the requirements set forth in this Exhibit, Exagen agrees to reimburse JBI for such fees or penalties. JBI reserves the right to reduce or not pay any invoice in the event that Exagen fails to comply with the requirements set forth in this Exhibit.

6. Exagen shall produce and send to JBI electronic reports each month in which payments were made or gifts or meals were provided to HCPs by Exagen on behalf of JBI, listing the following:

a. value of any gifts, meals, compensation paid, and/or entertainment provided to HCPs, whether their services were obtained through a written agreement or not;

b. nature, purpose and date of payments or other items of value provided; and

c. names, addresses, and federal Tax I.D. number of HCPs who were paid remuneration for Services relating to JBI.

7. Exagen shall report any violations of the compliance obligations set forth in this Agreement to JBI at the name and address listed in Article 21 (Notices) or through the Vendor & Distributor Hotline at 1-800-556-2496.

8. Exagen, at its expense, shall ensure that all personnel and subcontractors involved in providing Services attend and participate in training and educational programs reasonably scheduled by JBI. Exagen, at its expense, agrees to train and periodically provide refresher training to all its new and current personnel and subcontracted personnel providing Services regarding the compliance obligations set forth in this Agreement, including any JBI Policies applicable to Services. Exagen shall, upon request, provide JBI with a record of the training provided and the dates training was attended by any Exagen personnel and subcontractors.

EXHIBIT F – INSURANCE REQUIREMENTS

Insurance Requirements

Exagen shall procure and maintain, at all times and at its own expense, and ensure that its contractors, subcontractors, and consultants procure and maintain, during the term of this Agreement or as otherwise specified below, the types of insurance(s) specified below.

1. **Commercial General Liability**

   Exagen shall provide coverage on a Commercial General Liability Occurrence Coverage Form including coverage for product liability/completed operations with limits of not less than $[***] each occurrence and $[***] annual aggregate. Limits may be achieved via a combination of primary and umbrella/excess insurance. Such insurance shall include worldwide coverage including coverage for USA jurisdiction claims and occurrences. Any exclusions or amendments to the policy form must be disclosed to JBI.

2. **Workers' Compensation**

   Exagen shall provide Workers' Compensation Insurance covering all employees who are to provide Services under this Agreement (or equivalent insurance if Services are delivered outside of the United States). Employers' Liability coverage is required with limits of not less than the following:

Bodily Injury by Accident	$[***]
Bodily Injury by Disease	$[***]
Bodily Injury by Disease	$[***]

   Exagen's policy shall be specifically endorsed to waive any rights of subrogation against JBI, its subsidiaries, and its directors, officers and employees.

3. **Professional Liability/Errors & Omissions**

   Exagen shall maintain coverage on a Professional Liability Form (or equivalent) in the amount of no less than $[***] per claim with a $[***] annual aggregate. Such professional liability insurance coverage shall remain in effect for at least five (5) years after termination of the Agreement.

4. **All Risk Property Insurance**

   Exagen shall provide All Risk Property Insurance in an amount not less than the full replacement cost of Exagen's property.

5. **Automobile Liability Insurance**

   Exagen shall maintain Automobile Liability Insurance in an amount of not less than $[***] combined single limit for all owned, hired or used vehicles, covering bodily injury and property damage.

*** Certain material (indicated by an asterisk) has been omitted from this document pursuant to a request for Confidential Treatment. The omitted material has been filed separately with the Securities and Exchange Commission.

6. **Miscellaneous**

1. Exagen's policies for each of the coverages set forth above shall specifically waive any rights of subrogation against JBI and its affiliates, and their directors, officers and employees.

2. Exagen shall supply JBI with above proof of insurance and forms, including any endorsements, as required upon the signing of this Agreement, but JBI's failure to demand such proof or forms shall not waive JBI's rights to such coverage as specified herein.

3. All insurance companies for each of the coverage set forth above must be rated A or better with a financial rating of VII or better in the most recent A.M. Best's Rating Guide.

4. All insurance policies for each of the coverages set forth above or Exagen shall provide for thirty (30) days' prior written notice to JBI of any cancellation, nonrenewal or material change of coverage.

5. All Exagen insurance will be primary with no right of contribution by JBI, its affiliates, or their respective insurers. Exagen will be solely and fully responsible for any deductibles or self-insured retentions under any required coverage. Exagen will remain liable for any insurance obligation not satisfied; however, this requirement will in no way restrict or reduce any indemnification obligations contained elsewhere in this Agreement.

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

EXHIBIT G – DISPUTE RESOLUTION

Any controversy or claim arising out of or relating to this Agreement shall be resolved by arbitration before a single arbitrator in accordance with the then current CPR

Non-Administered Arbitration Rules ("CPR Rules") (www.cpradr.org), except where those rules conflict with this provision, in which case this provision controls. The arbitrator shall be selected within twenty (20) business days from commencement of the arbitration from the CPR Panel of Distinguished Neutrals, unless a candidate not on such panel is approved by both parties. Within forty-five (45) days of initiation of arbitration, the parties shall reach agreement upon and thereafter follow procedures, including limits on discovery, assuring that the arbitration will be concluded and the award rendered within no more than eight (8) months from selection of the arbitrator or, failing agreement, procedures meeting such time limits will be designed by the Arbitrator and adhered to by the parties. The arbitration shall be held in New York, New York and the arbitrator shall apply the substantive law controlling this Agreement, except that the interpretation and enforcement of this arbitration provision shall be governed by the Federal Arbitration Act. Any court with jurisdiction shall enforce this clause and enter judgment on any award. The arbitrator may award the costs and expenses of the arbitration as provided in the CPR Rules, but each party shall bear its own attorney fees

Prior to commencement of arbitration, the parties must attempt to mediate their dispute using a professional mediator selected by agreement from American Arbitration Association, the CPR Institute for Dispute Resolution or like organization or, absent agreement, through selection procedures administered by the CPR. Within a period of forty-five (45) days after the request for mediation, the parties agree to convene with the mediator, with business representatives present, for at least one session to attempt to resolve the matter. In no event will mediation delay commencement of the arbitration for more than forty-five (45) days absent agreement of the parties or interfere with the availability of emergency relief.

Each party has the right to seek from the appropriate court provisional remedies to avoid irreparable harm, maintain the status quo, or preserve the subject matter of the dispute. Rule 14 of the CPR Rules does not apply to this Agreement. All aspects of the mediation and arbitration shall be treated as confidential.

EXCEPT AS OTHERWISE PROVIDED IN THIS AGREEMENT, EACH PARTY HERETO WAIVES: (1) ITS RIGHT TO TRIAL OF ANY ISSUE BY JURY, (2) WITH THE EXCEPTION OF RELIEF MANDATED BY STATUTE, ANY CLAIM TO PUNITIVE, EXEMPLARY, MULTIPLIED, INDIRECT, CONSEQUENTIAL OR LOST PROFITS/REVENUES DAMAGES, AND (3) ANY CLAIM FOR ATTORNEY FEES, COSTS AND PREJUDGMENT INTEREST.

CERTAIN MATERIAL (INDICATED BY AN ASTERISK) HAS BEEN OMITTED FROM THIS DOCUMENT PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT. THE OMITTED MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

EXHIBIT H – REPORTING ADVERSE EVENTS, SPECIAL SITUATIONS, AND PRODUCT QUALITY COMPLAINTS (PQC)

The Parties shall enter into the following Pharmacovigilance Agreement as of the execution date.

Pharmacovigilance Agreement

THIS PHARMACOVIGILANCE AGREEMENT ("Agreement") effective as of the date of last signature ("Effective Date") is made between:

(1) Janssen Biotech, Inc., a company having its principal place of business at 800 Ridgeview Drive, Horsham, PA 19044 ("JBI"); and

(2) Exagen Diagnostics Inc, a company having its principal place of business at 1261 Liberty Way, Suite C, Vista CA 92081 ("Exagen").

JBI and Exagen may be referred to herein individually as a "Party" and collectively as the "Parties".

Recital

(A) JBI and / or its affiliates are the Marketing Authorisation Holder (MAH) of the Product in the Territory.

(B) JBI and Exagen entered into an agreement dated [_____] of Master Agreement (as amended from time to time, hereinafter referred to as the "Master Agreement") whereby JBI grants Exagen certain rights to provide various sales and promotion services and related to SIMPONI® (golimumab) 50mg dose once-monthly self-injectable biologic for treatment of adults with (1) moderate to severe rheumatoid arthritis (RA), given with MTX, (2) active psoriatic arthritis (PsA), given alone or with MTX, and (3) active ankylosing spondylitis (AS) ("**Permitted Indications**") the Product in accordance with the terms and conditions set forth in the Master Agreement.

(C) JBI and Exagen wish to delineate the Parties' respective pharmacovigilance obligations and responsibilities for the Product to ensure that there is adequate coordination and sharing of relevant safety information between the Parties in order to facilitate prompt filing of accurate and consistent reports to Regulatory Authorities which complies with the Applicable Law.

IT IS AGREED as follows:

1 Definitions

1.1 **"Adverse Event"** (AE) means any untoward medical occurrence in a patient or a clinical-trial subject administered a medicinal product and which does not necessarily have to have a causal relationship with this treatment. An adverse event can therefore be any unfavourable and unintended sign (for example, an abnormal

laboratory finding), symptom, or disease temporally associated with the use of a medicinal product, whether or not considered related to this medicinal product.

1.2 **"Adverse Device Effect"** (ADE) means an adverse event related to the use of a medical device. This includes any adverse event resulting from insufficiencies or inadequacies in the instructions for use, the deployment, the implantation, the installation, the operation, or any malfunction of the medical device. This also includes any event that is a result of a use error or intentional misuse.

1.3 **"Applicable Law"** means the applicable laws, rules, regulations, including any guidelines or other requirements of any Regulatory Authority in the relevant country of the Territory, and industry guidelines or codes of conduct that may apply to the review and analysis of safety information, the reporting of safety information to Regulatory Authorities and the maintenance of records thereof.

1.4 **"Date of First Receipt"** means the date of receipt or coming into possession or control of safety information by, which contains at a minimum a suspect medicinal product and a suspect event i.e. an incomplete case. Unless otherwise indicated in the Applicable Law the Regulatory Clock Start Date or Day Zero for regulatory reporting, is the date the minimum criteria for reporting as defined by the Applicable Law becomes available (i.e., an identifiable subject/ patient, identifiable reporter, suspect product, and event).

1.5 **"Incomplete Case"** means a case that does not contain minimum criteria for reporting as defined by the Applicable Law (i.e., an identifiable subject/ patient, identifiable reporter, suspect medicinal product, and event), but at a minimum contains a suspect medicinal product and a suspect event. Such reports are entered on the safety database as potential cases of value for signal detection purposes.

1.6 **"Product"** SIMPONI® (golimumab) 50mg dose once-monthly self-injectable biologic for treatment of adults.

1.7 **"Product Quality Complaint"** (PQC) Any written, electronic or oral communication that alleges deficiencies related to the identity, quality, durability, reliability, safety, effectiveness or performance of a product after it is released for distribution.

Note: Malfunction of a device product is also considered to be a PQC.

1.8 **"Regulatory Authority"** means any applicable federal, national, regional, state, provincial or local regulatory agencies, departments, bureaus, commissions, councils or other government entities regulating or otherwise exercising authority with respect to the Product in the relevant Territory.

1.9 **"Special Situation"** Occurrences or reports that may not contain an adverse event, which must still be collected and reported in order to meet regulatory safety reporting requirements and J&J Company policies:

- Overdose of Product,
- Pregnancy exposure (maternal and paternal),

- Exposure to the Product from breastfeeding,
- Suspected abuse/misuse of the Product,
- Inadvertent or accidental exposure to the Product (including occupational exposure),
- Any failure of expected pharmacological or medical device action (i.e. lack of effect) of the Product,
- Unexpected therapeutic or clinical benefit from use of the Product,
- Medication error involving the Product with or without patient/consumer exposure to the Product, (e.g. name confusion) OR that caused an unintended effect or could cause an intended effect (e.g. adult medicine given to a young child),
- Suspected transmission of an infectious agent via Product,
- Expired drug use and falsified medicine
- Off-label use – situations where the Product is intentionally used for a medical purpose not in accordance with the authorized product information

Off-label use without an associated AE, Special Situation, UE, ADE or AEPQC should be collected only when it is specifically and voluntarily brought to the attention of the Exagen in an unsolicited manner by a reporter e.g., Health Care Professional or data obtained from databases where off-label use may be systematically collected (e.g., reimbursement database in US), and in accordance with local procedure in compliance with local laws and regulations. Follow-up of off-label use is not required.

1.10 **"Territory"** this activity is conducted in [**add list of countries here or to a schedule**]

1.11 **"Undesirable Effect"** (UE) shall mean an adverse reaction for human health attributable to the normal or reasonably foreseeable use of a cosmetic product.

2 Reporting Requirements

2.1 Exagen shall collect any information in or coming into its possession or control for the Product regardless of source, relating to an Adverse Event (AE), Special Situation, AE associated with a Product Quality Complaint (AEPQC), Undesirable Effect (UE) or Adverse Device Effect (ADE), as applicable and Incomplete Cases, in a format as agreed upon by the Parties.

2.2 Exagen shall forward to JBI such information immediately, but in no case later than twenty-four (24) hours from the Date of First Receipt by the Exagen. For the avoidance of doubt, all Incomplete Cases should also be

collected and forwarded immediately, but in no case later than twenty-four (24) hours from the date of collection by the Exagen.

3 Training

3.1 Exagen shall ensure that its personnel involved in this Agreement are trained on annual basis following execution of this Agreement, as necessary, to ensure compliance with this Agreement and the Applicable Law. For this purpose JBI shall provide Exagen with the relevant training material.

3.2 Exagen shall ensure that its personnel involved in the execution of services pertaining to this project (including applicable subcontractors) are trained in the collection and reporting of AEs, Special Situations, AEPQC, UEs or ADEs, prior to the start of the project and at least annually thereafter if such services remain in effect, to ensure compliance with this Agreement and the Applicable Law. This includes, but is not limited to, monitoring applicable AE, Special Situation, AEPQC, UE and ADE, training, and maintaining documentation. JBI may require Exagen to provide additional training when there is a change in the governing contracts and/or processes or changes in Exagen personnel.

4 Establishment of a Tracking System

4.1 Exagen shall establish and maintain a tracking system for the collection, recording and collation of safety information for the Product.

4.2 Exagen must provide a summary of all identified AE, Special Situation, AEPQC, UE and ADE reports, as applicable, as outlined in the vendor training and/ or project protocol/ scope of work. The frequency of reconciliation must be agreed prior to project initiation and will depend on the duration and extent of the project. Exagen and JBI will collaborate to identify any missing safety information, including, but not limited to, completeness of case identification numbers, in case of discrepancies, to ensure receipt of all collected safety information by JBI.

5 Retention Policy

5.1 Exagen shall maintain and archive records of all source documentation generated by the activity (records, questionnaires, reports), personnel training records and other relevant information relating to this project and the Exagen’s obligations under this Agreement for a period specified by JBI and Applicable Law. Exagen must have appropriate storage capabilities (e.g., preventing accidental damage of physical records and appropriate back up of electronic storage systems) if storing original AE, Special Situations, AEPQC, UE and ADE documentation. Notwithstanding the above, before Exagen destroys any safety records it will notify JBI of its intention to do so, affording JBI the opportunity to retain such records if it so wishes.

6 Audit

6.1 JBI or its designee shall have the right to audit Exagen, to verify compliance with this Agreement and to the Applicable Law, provided that JBI provides Exagen with at least ninety (90) Calendar Days prior written notice. The Parties shall agree upon the scope of the audit with a written audit plan to be submitted by JBI thirty (30) Calendar Days prior to the audit. Exagen will allow such access to its facilities, systems, personnel and records, in whatever form and in any location (including locations owned or operated by a third party) as may reasonably be necessary to enable the JBI or its designee to evaluate and ensure compliance with this Agreement and the Applicable Law. JBI shall communicate audit findings in a written audit report in a timely manner. The Parties undertake to cooperate with each other to diligently investigate and resolve any such audit findings.

7 Data Privacy

7.1 In the performance of the above safety activities, both Parties will comply with all Applicable Laws in respect of data privacy in order to protect Personal Data.

7.2 Each Party shall collect, use and disclose any Personal Data obtained in the course of performing the safety activities under this Agreement solely for the purposes of complying with the regulatory obligations as described in this Agreement, or as otherwise required by Applicable Law or by a court order. Both Parties will use electronic, physical and any other safeguards appropriate to the nature of the information to prevent any use or disclosure of Personal Data other than as provided for above. Both Parties will also take reasonable precautions to protect the Personal Data from accidental, unauthorised, or unlawful alteration or destruction.

7.3 Each Party shall notify the other Party promptly of any accidental, unauthorised, unlawful destruction, loss, alteration, or disclosure of, or access to the Personal Data, and take immediate steps to rectify any such security breach.

8 Follow Up

8.1 Exagen will be responsible and shall cooperate with JBI, to diligently follow up on safety information. Follow-up information will follow the same timelines and mechanism as initial information noted above and will include the receipt date for the follow-up information.

9 Miscellaneous

9.1 Notwithstanding the above, in the event Exagen is informed of AE, Special Situations, AEPQC, UE or ADE related to the use any other J&J products that Exagen is aware of, Exagen shall report these to JBI within twenty-four (24) hours of Exagen’s Date of First Receipt.

IN WITNESS WHEREOF, this Agreement has been executed by the duly authorized representatives of the Parties.

SIGNED for and on behalf of Exagen:

Print Name:

Title:

Date:

Sign:

SIGNED for and on behalf of JBI:

Print Name:

Title:

Date:

Sign:

CONTACT DETAILS FOR ADVERSE EVENT REPORTING

For **JBI**

Safety information (AE, UE, SS, PQC) are sent to:	
Primary Contact (for issue management and compliance oversight)	

For **Exagen:**

Queries will be sent to:	
Primary Contact	**Name:** **Company:** **Telephone:** **Fax:** **Email:**

STANDARD INDUSTRIAL/COMMERCIAL MULTI-TENANT LEASE—NET
AIR COMMERCIAL REAL ESTATE ASSOCIATION

1. **Basic Provisions ("Basic Provisions")** .

1.1 **Parties:** This Lease **("Lease")**, dated for reference purposes only January 13, 2012, is made by and between RGS Properties **("Lessor")** and Exagen Diagnostics, Inc. **("Lessee")**, (collectively the **"Parties"**, or individually a **"Party"**).

1.2(a) **Premises:** That certain portion of the Project (as defined below), including all improvements therein or to be provided by Lessor under the terms of this Lease, commonly known by the street address of 1261 Liberty Way, Suite C, located in the City of Vista, County of San Diego, State of California, with zip code 92083, as outlined on Exhibit A attached hereto **("Premises")** and generally described as (describe briefly the nature of the Premises): approximately 6,582 square feet of a larger industrial building. In addition to Lessee's rights to use and occupy the Premises as hereinafter specified, Lessee shall have non-exclusive rights to the any utility raceways of the building containing the Premises (" **Building**") and to the common Areas (as defined in Paragraph 2.7 below), but shall not have any rights to the roof or exterior walls of the Building or to any other buildings in the Project. The Premises, the Building, the Common Areas, the land upon which they are located, along with all other buildings and improvements thereon, are herein collectively referred to as the **"Project."** (See also Paragraph 2)

1.2(b) **Parking:** thirteen (13) unreserved vehicle parking spaces. (See also Paragraph 2.6)

1.3 **Term:** five (5) years and zero (0) months **("Original Term")** commencing February 12, 2012 **("Commencement Date")** and ending January 31, 2017 **("Expiration Date")**. (See also Paragraph 3)

1.4 **Early Possession:** See Paragraph 57 **("Early Possession Date")**. (See also Paragraphs 3.2 and 3.3)

1.5 **Base Rent:** $4,804.86 per month **("Base Rent")**, payable on the first day of each month commencing February 1, 2012. (See also Paragraph 4)

☒ If this box is checked, there are provisions in this Lease for the Base Rent to be adjusted. See Paragraph 50

1.6 **Lessee's Share of Common Area Operating Expenses:** twenty three point seventy seven percent (23.77%) **("Lessee's Share")**. Lessee's Share has been calculated by dividing the approximate square footage of the Premises by the approximate square footage of the Project. In the event that the size of the Premises and/or the Project are modified during the term of this Lease, Lessor shall recalculate Lessee's Share to reflect such modification.

1.7 **Base Rent and Other Monies Paid Upon Execution:**

(a) **Base Rent:** $4,804.86 for the period February 2012.

(b) **Common Area Operating Expenses:** $1,571.10 for the period February 2012.

(c) **Security Deposit:** $7,500.00 **("Security Deposit")**. (See also Paragraph 5)

(d) **Other:** $60,000.00 for prepaid rent - see Paragraph 57.

(e) **Total Due Upon Execution of this Lease:** $73,875.96.

1.8 **Agreed Use:** General office and lab space for a diagnostics company. (See also Paragraph 6)

1.9 **Insuring Party**. Lessor is the **"Insuring Party"**. (See also Paragraph 8)

1.10 **Real Estate Brokers:** (See also Paragraph 15)

(a) **Representation:** The following real estate brokers (the **"Brokers"**) and brokerage relationships exist in this transaction (check applicable boxes):

☒ Colliers International - Peter Merz/Daniel Knoke represents Lessor exclusively (**"Lessor's Broker"**);

☒ Cassidy Turley/BRE - Steven Field represents Lessee exclusively (**"Lessee's Broker"**); or

☐ _____ represents both Lessor and Lessee (**"Dual Agency"**).

(b) **Payment to Brokers:** Upon execution and delivery of this Lease by both Parties, Lessor shall pay to the Brokers the brokerage fee agreed to in a separate written agreement (or if there is no such agreement, the sum of 22,737.44 or approximately 7% (split 4% to Cassidy Turley/BRE & 3% to Colliers)% of the total Base Rent for the brokerage services rendered by the Brokers).

1.11 **Guarantor**. The obligations of the Lessee under this Lease are to be guaranteed by N/A **("Guarantor")**. (See also Paragraph 37)

1.12 **Attachments**. Attached hereto are the following, all of which constitute a part of this Lease:

☒ an Addendum consisting of Paragraphs 50 through 60;

☐ a site plan depicting the Premises;

☒ a site plan depicting the Project; Exhibit A

☐ a current set of the Rules and Regulations for the Project;

☐ a current set of the Rules and Regulations adopted by the owners' association;

☐ a Work Letter;

☒ other (specify); Paragraph 61 - Option to Extend.

2. **Premises**.

2.1 **Letting.** Lessor hereby leases to Lessee, and Lessee hereby leases from Lessor, the Premises, for the term, at the rental, and upon all of the terms, covenants and conditions set forth in this Lease. Unless otherwise provided herein, any statement of size set forth in this Lease, or that may have been used in calculating Rent, is an approximation which the Parties agree is reasonable and any payments based thereon are not subject to revision whether or not the actual size is more or less. **NOTE: Lessee is advised to verify the actual size prior to executing this Lease.**

2.2 **Condition**. Lessor shall deliver that portion of the Premises contained within the Building **("Unit")** to Lessee broom clean and free of debris on the Commencement Date or the Early Possession Date, whichever first occurs **("Start Date")**, and, so long as the required service contracts described in Paragraph 7.1(b) below are obtained by Lessee and in effect within thirty days following the Start Date, warrants that the existing electrical, plumbing, fire sprinkler, lighting, heating, ventilating and air conditioning systems **("HVAC")**, loading doors, sump pumps, if any, and all other such elements in the Unit, other than those constructed by Lessee, shall be in good operating condition on said date, that the structural elements of the roof, bearing walls and foundation of the Unit shall be free of material defects, and that the Unit does not contain hazardous levels of any mold or fungi defined as toxic under applicable state or federal law. If a non-compliance with such warranty exists as of the Start Date, or if one of such systems or elements should malfunction or fail within the appropriate warranty period, Lessor shall, as Lessor's sole obligation with respect to such matter, except as otherwise provided in this Lease, promptly after receipt of written notice from Lessee setting forth with specificity the nature and extent of such non-compliance, malfunction or failure, rectify same at Lessor's expense. The warranty periods shall be as follows: (i) 6 months as to the HVAC systems, and (ii) 30 days as to the remaining systems and other elements of the Unit. If Lessee does not give Lessor the required notice within the appropriate warranty period, correction of any such non-compliance, malfunction or failure shall be the obligation of Lessee at Lessee's sole cost and expense (except for the repairs to the fire sprinkler systems, roof, foundations, and/or bearing walls—see Paragraph 7).

2.3 **Compliance**. Lessor warrants that to the best of its knowledge the improvements on the Premises and the Common Areas comply with the building codes that were in effect at the time that each such improvement, or portion thereof, was constructed, and also with all applicable laws, covenants or restrictions of record, regulations, and ordinances in effect on the Start Date **("Applicable Requirements")** . Said warranty does not apply to the use to which Lessee will put the Premises, modifications which may be required by the Americans with Disabilities Act or any similar laws as a result of Lessee's use (see Paragraph 49), or to any Alterations or Utility Installations (as defined in Paragraph 7.3(a)) made or to be made by Lessee. **NOTE: Lessee is responsible for determining whether or not the Applicable Requirements and especially the zoning are appropriate for Lessee's intended use, and acknowledges that past uses of the Premises may no longer be allowed**. If the Premises do not comply with said warranty, Lessor shall, except as otherwise provided, promptly after receipt of written notice from Lessee setting forth with specificity the nature and extent of such non-compliance, rectify the same at Lessor's expense. If Lessee does not give Lessor written notice of a non-compliance with this warranty within 6 months following the Start Date, correction of that non-compliance shall be the obligation of Lessee at Lessee's sole cost and expense. If the Applicable Requirements are hereafter changed so as to require during the term of this Lease the construction of an addition to or an alteration of the Unit, Premises and/or Building, the remediation of any Hazardous Substance, or the reinforcement or other physical modification of the Unit, Premises and/or Building **("Capital Expenditure")**, Lessor and Lessee shall allocate the cost of such work as follows:

(a) Subject to Paragraph 2.3(c) below, if such Capital Expenditures are required as a result of the specific and unique use of the Premises by Lessee as compared with uses by tenants in general, Lessee shall be fully responsible for the cost thereof, provided, however that if such Capital Expenditure is required during the last 2 years of this Lease and the cost thereof exceeds 6 months' Base Rent, Lessee may instead terminate this Lease unless Lessor notifies Lessee, in writing, within 10 days after receipt of Lessee's termination notice that Lessor has elected to pay the difference between the actual cost thereof and the amount equal to 6 months' Base Rent. If Lessee elects termination, Lessee shall immediately cease the use of the Premises which requires such Capital Expenditure and deliver to Lessor written notice specifying a termination date at least 90 days thereafter. Such termination date shall, however, in no event be earlier than the last day that Lessee could legally utilize the Premises without commencing such Capital Expenditure.

(b) If such Capital Expenditure is not the result of the specific and unique use of the Premises by Lessee (such as, governmentally mandated seismic modifications), then Lessor shall pay for such Capital Expenditure and Lessee shall only be obligated to pay, each month during the remainder of the term of this Lease, on the date that on which the Base Rent is due, an amount equal to 144th of the portion of such costs reasonably attributable to the Premises. Lessee shall pay Interest on the balance but may prepay its obligation at any time. If, however, such Capital Expenditure is required during the last 2 years of this Lease or if Lessor reasonably determines that it is not economically feasible to pay its share thereof, Lessor shall have the option to terminate this Lease upon 90 days prior written notice to Lessee unless Lessee notifies Lessor, in writing, within 10 days after receipt of Lessor's termination notice that Lessee will pay for such Capital Expenditure. If Lessor does not elect to terminate, and fails to tender its share of any such Capital Expenditure, Lessee may advance such funds and deduct same, with Interest, from Rent until Lessor's share of such costs have been fully paid. If Lessee is unable to finance Lessor's share, or if the balance of the Rent due and payable for the remainder of this Lease is not sufficient to fully reimburse Lessee on an offset basis, Lessee shall have the right to terminate this Lease upon 30 days written notice to Lessor.

(c) Notwithstanding the above, the provisions concerning Capital Expenditures are intended to apply only to non-voluntary, unexpected, and new Applicable Requirements. If the Capital Expenditures are instead triggered by Lessee as a result of an actual or proposed change in use, change in intensity of use, or modification to the Premises then, and in that event, Lessee shall either: (i) immediately cease such changed use or intensity of use and/or take such other steps as may be necessary to eliminate the requirement for such Capital Expenditure, or (ii) complete such Capital Expenditure at its own expense. Lessee shall not have any right to terminate this Lease.

2.4 **Acknowledgements**. Lessee acknowledges that: (a) it has been advised by Lessor and/or Brokers to satisfy itself with respect to the condition of the Premises (including but not limited to the electrical, HVAC and fire sprinkler systems, security, environmental aspects, and compliance with Applicable Requirements and the Americans with Disabilities Act), and their suitability for Lessee's intended use, (b) Lessee has made such investigation as it deems necessary with reference to such matters and assumes all responsibility therefor as the same relate to its occupancy of the Premises, and (c) neither Lessor, Lessor's agents, nor Brokers have made any oral or written representations or warranties with respect to said matters other than as set forth in this Lease. In addition, Lessor acknowledges that: (i) Brokers have made no representations, promises or warranties concerning Lessee's ability to honor the Lease or suitability to occupy the Premises, and (ii) it is Lessor's sole responsibility to investigate the financial capability and/or suitability of all proposed tenants.

2.5 **Lessee as Prior Owner/Occupant**. The warranties made by Lessor in Paragraph 2 shall be of no force or effect if immediately prior to the Start Date Lessee was the owner or occupant of the Premises. In such event, Lessee shall be responsible for any necessary corrective work.

2.6 **Vehicle Parking**. Lessee shall be entitled to use the number of parking spaces specified in Paragraph 1.2(b) on those portions of the Common Areas designated from time to time by Lessor for parking. Lessee shall not use more parking spaces than said number. Said parking spaces shall be used for parking by vehicles no larger than full-size passenger automobiles or pick-up trucks, herein called **"Permitted Size Vehicles."** Lessor may regulate the loading and unloading of vehicles by adopting Rules and Regulations as provided in Paragraph 2.9. No vehicles other than

Permitted Size Vehicles may be parked in the Common Area without the prior written permission of Lessor. In addition:

(a) Lessee shall not permit or allow any vehicles that belong to or are controlled by Lessee or Lessee's employees, suppliers, shippers, customers, contractors or invitees to be loaded, unloaded, or parked in areas other than those designated by Lessor for such activities.

(b) Lessee shall not service or store any vehicles in the Common Areas.

(c) If Lessee permits or allows any of the prohibited activities described in this Paragraph 2.6, then Lessor shall have the right, without notice, in addition to such other rights and remedies that it may have, to remove or tow away the vehicle involved and charge the cost to Lessee, which cost shall be immediately payable upon demand by Lessor.

2.7 **Common Areas - Definition**. The term **"Common Areas"** is defined as all areas and facilities outside the Premises and within the exterior boundary line of the Project and interior utility raceways and installations within the Unit that are provided and designated by the Lessor from time to time for the general non-exclusive use of Lessor, Lessee and other tenants of the Project and their respective employees, suppliers, shippers, customers, contractors and invitees, including parking areas, loading and unloading areas, trash areas, roadways, walkways, driveways and landscaped areas.

2.8 **Common Areas - Lessee's Rights**. Lessor grants to Lessee, for the benefit of Lessee and its employees, suppliers, shippers, contractors, customers and invitees, during the term of this Lease, the non-exclusive right to use, in common with others entitled to such use, the Common Areas as they exist from time to time, subject to any rights, powers, and privileges reserved by Lessor under the terms hereof or under the terms of any rules and regulations or restrictions governing the use of the Project. Under no circumstances shall the right herein granted to use the Common Areas be deemed to include the right to store any property, temporarily or permanently, in the Common Areas. Any such storage shall be permitted only by the prior written consent of Lessor or Lessor's designated agent, which consent may be revoked at any time. In the event that any unauthorized storage shall occur then Lessor shall have the right, without notice, in addition to such other rights and remedies that it may have, to remove the property and charge the cost to Lessee, which cost shall be immediately payable upon demand by Lessor.

2.9 **Common Areas - Rules and Regulations**. Lessor or such other person(s) as Lessor may appoint shall have the exclusive control and management of the Common Areas and shall have the right, from time to time, to establish, modify, amend and enforce reasonable rules and regulations **("Rules and Regulations")** for the management, safety, care, and cleanliness of the grounds, the parking and unloading of vehicles and the preservation of good order, as well as for the convenience of other occupants or tenants of the Building and the Project and their invitees. Lessee agrees to abide by and conform to all such Rules and Regulations, and shall use its best efforts to cause its employees, suppliers, shippers, customers, contractors and invitees to so abide and conform. Lessor shall not be responsible to Lessee for the non-compliance with said Rules and Regulations by other tenants of the Project.

2.10 **Common Areas - Changes**. Lessor shall have the right, in Lessor's sole discretion, from time to time:

(a) To make changes to the Common Areas, including, without limitation, changes in the location, size, shape and number of driveways, entrances, parking spaces, parking areas, loading and unloading areas, ingress, egress, direction of traffic, landscaped areas, walkways and utility raceways;

(b) To close temporarily any of the Common Areas for maintenance purposes so long as reasonable access to the Premises remains available;

(c) To designate other land outside the boundaries of the Project to be a part of the Common Areas;

(d) To add additional buildings and improvements to the Common Areas;

(e) To use the Common Areas while engaged in making additional improvements, repairs or alterations to the Project, or any portion thereof; and

(f) To do and perform such other acts and make such other changes in, to or with respect to the Common Areas and Project as Lessor may, in the exercise of sound business judgment, deem to be appropriate.

3. **Term**.

3.1 **Term**. The Commencement Date, Expiration Date and Original Term of this Lease are as specified in Paragraph 1.3.

3.2 **Early Possession**. If Lessee totally or partially occupies the Premises prior to the Commencement Date, the obligation to pay Base Rent shall be abated for the period of such early possession. All other terms of this Lease (including but not limited to the obligations to pay Lessee's Share of Common Area Operating Expenses, Real Property Taxes and insurance premiums and to maintain the Premises) shall be in effect during such period. Any such early possession shall not affect the Expiration Date.

3.3 **Delay In Possession**. Lessor agrees to use its best commercially reasonable efforts to deliver possession of the Premises to Lessee by the Commencement Date. If, despite said efforts, Lessor is unable to deliver possession as agreed, Lessor shall not be subject to any liability therefor, nor shall such failure affect the validity of this Lease or change the Expiration Date. Lessee shall not, however, be obligated to pay Rent or perform its other obligations until Lessor delivers possession of the Premises and any period of rent abatement that Lessee would otherwise have enjoyed shall run from the date of the delivery of possession and continue for a period equal to what Lessee would otherwise have enjoyed, but minus any days of delay caused by the acts or omissions of Lessee. If possession is not delivered within 60 days after the Commencement Date, Lessee may, at its option, by notice in writing within 10 days after the end of such 60 day period, cancel this Lease, in which event the Parties shall be discharged from all obligations hereunder. If such written notice is not received by Lessor within said 10 day period, Lessee's right to cancel shall terminate. Except as otherwise provided, if possession is not tendered to Lessee by the Start Date and Lessee does not terminate this Lease, as aforesaid, any period of rent abatement that Lessee would otherwise have enjoyed shall run from the date of delivery of possession and continue for a period equal to what Lessee would otherwise have enjoyed under the terms hereof, but minus any days of delay caused by the acts or omissions of Lessee. If possession of the Premises is not delivered within 4 months after the Commencement Date, this Lease shall terminate unless other agreements are reached between Lessor and Lessee, in writing.

3.4 **Lessee Compliance**. Lessor shall not be required to tender possession of the Premises to Lessee until Lessee complies with its obligation to provide evidence of insurance (Paragraph 8.5). Pending delivery of such evidence, Lessee shall be required to perform all of its obligations under this Lease from and after the Start Date, including the payment of Rent, notwithstanding Lessor's election to withhold possession pending receipt of such evidence of insurance. Further, if Lessee is required to perform any other conditions prior to or concurrent with the Start Date, the Start Date shall occur but Lessor may elect to withhold possession until such conditions are satisfied.

4. **Rent**.

4.1 **Rent Defined**. All monetary obligations of Lessee to Lessor under the terms of this Lease (except for the Security Deposit) are deemed to be rent **("Rent")**.

4.2 **Common Area Operating Expenses**. Lessee shall pay to Lessor during the term hereof, in addition to the Base Rent, Lessee's Share (as specified in Paragraph 1.6) of all Common Area Operating Expenses, as hereinafter defined, during each calendar year of the term of this Lease, in accordance with the following provisions:

(a) **"Common Area Operating Expenses"** are defined, for purposes of this Lease, as all costs incurred by Lessor relating to the ownership and operation of the Project, including, but not limited to, the following:

(i) The operation, repair and maintenance, in neat, clean, good order and condition, and if necessary the

replacement, of the following:

(aa) The Common Areas and Common Area improvements, including parking areas, loading and unloading areas, trash areas, roadways, parkways, walkways, driveways, landscaped areas, bumpers, irrigation systems, Common Area lighting facilities, fences and gates, elevators, roofs, and roof drainage systems.

(bb) Exterior signs and any tenant directories. (cc) Any fire sprinkler systems.

(ii) The cost of water, gas, electricity and telephone to service the Common Areas and any utilities not separately metered.

(iii) The cost of trash disposal, pest control services, property management, security services, owners' association dues and fees, the cost to repaint the exterior of any structures and the cost of any environmental inspections.

(iv) Reserves set aside for maintenance, repair and/or replacement of Common Area improvements and equipment.

(v) Real Property Taxes (as defined in Paragraph 10).

(vi) The cost of the premiums for the insurance maintained by Lessor pursuant to Paragraph 8.

(vii) Any deductible portion of an insured loss concerning the Building or the Common Areas.

(viii) Auditors', accountants' and attorneys' fees and costs related to the operation, maintenance, repair and replacement of the Project.

(ix) The cost of any capital improvement to the Building or the Project not covered under the provisions of Paragraph 2.3 provided; however, that Lessor shall allocate the cost of any such capital improvement over a 12 year period and Lessee shall not be required to pay more than Lessee's Share of 1/144th of the cost of such capital improvement in any given month.

(x) The cost of any other services to be provided by Lessor that are stated elsewhere in this Lease to be a Common Area Operating Expense.

(b) Any Common Area Operating Expenses and Real Property Taxes that are specifically attributable to the Unit, the Building or to any other building in the Project or to the operation, repair and maintenance thereof, shall be allocated entirely to such Unit, Building, or other building. However, any Common Area Operating Expenses and Real Property Taxes that are not specifically attributable to the Building or to any other building or to the operation, repair and maintenance thereof, shall be equitably allocated by Lessor to all buildings in the Project.

(c) The inclusion of the improvements, facilities and services set forth in Subparagraph 4.2(a) shall not be deemed to impose an obligation upon Lessor to either have said improvements or facilities or to provide those services unless the Project already has the same, Lessor already provides the services, or Lessor has agreed elsewhere in this Lease to provide the same or some of them.

(d) Lessee's Share of Common Area Operating Expenses is payable monthly on the same day as the Base Rent is due hereunder. The amount of such payments shall be based on Lessor's estimate of the annual Common Area Operating Expenses. Within 60 days after written request (but not more than once each year) Lessor shall deliver to Lessee a reasonably detailed statement showing Lessee's Share of the actual Common Area Operating Expenses incurred during the preceding year. If Lessee's payments during such year exceed Lessee's Share, Lessor shall credit the amount of such over-payment against Lessee's future payments. If Lessee's payments during such year were less than Lessee's Share, Lessee shall pay to Lessor the amount of the deficiency within 10 days after delivery by Lessor to Lessee of the statement.

(e) Common Area Operating Expenses shall not include any expenses paid by any tenant directly to third parties, or as to which Lessor is otherwise reimbursed by any third party, other tenant, or insurance proceeds. Landlord shall cap the common area expense increase to five percent (5%) per year for the initial Lease Term.

4.3 **Payment.** Lessee shall cause payment of Rent to be received by Lessor in lawful money of the United States, without offset or deduction (except as specifically permitted in this Lease), on or before the day on which it is due. All monetary amounts shall be rounded to the nearest whole dollar. In the event that any invoice prepared by Lessor is inaccurate such inaccuracy shall not constitute a waiver and Lessee shall be obligated to pay the amount set forth in this Lease. Rent for any period during the term hereof which is for less than one full calendar month shall be prorated based upon the actual number of days of said month. Payment of Rent shall be made to Lessor at its address stated herein or to such other persons or place as Lessor may from time to time designate in writing. Acceptance of a payment which is less than the amount then due shall not be a waiver of Lessor's rights to the balance of such Rent, regardless of Lessor's endorsement of any check so stating. In the event that any check, draft, or other instrument of payment given by Lessee to Lessor is dishonored for any reason, Lessee agrees to pay to Lessor the sum of $25 in addition to any Late Charge and Lessor, at its option, may require all future Rent be paid by cashier's check. Payments will be applied first to accrued late charges and attorney's fees, second to accrued interest, then to Base Rent and Common Area Operating Expenses, and any remaining amount to any other outstanding charges or costs.

5. **Security Deposit**. Lessee shall deposit with Lessor upon execution hereof the Security Deposit as security for Lessee's faithful performance of its obligations under this Lease. If Lessee fails to pay Rent, or otherwise Defaults under this Lease, Lessor may use, apply or retain all or any portion of said Security Deposit for the payment of any amount due already due Lessor, for Rents which will be due in the future, and/ or to reimburse or compensate Lessor for any liability, expense, loss or damage which Lessor may suffer or incur by reason thereof. If Lessor uses or applies all or any portion of the Security Deposit, Lessee shall within 10 days after written request therefor deposit monies with Lessor sufficient to restore said Security Deposit to the full amount required by this Lease. If the Base Rent increases during the term of this Lease, Lessee shall, upon written request from Lessor, deposit additional monies with Lessor so that the total amount of the Security Deposit shall at all times bear the same proportion to the increased Base Rent as the initial Security Deposit bore to the initial Base Rent. Should the Agreed Use be amended to accommodate a material change in the business of Lessee or to accommodate a sublessee or assignee, Lessor shall have the right to increase the Security Deposit to the extent necessary, in Lessor's reasonable judgment, to account for any increased wear and tear that the Premises may suffer as a result thereof. If a change in control of Lessee occurs during this Lease and following such change the financial condition of Lessee is, in Lessor's reasonable judgment, significantly reduced, Lessee shall deposit such additional monies with Lessor as shall be sufficient to cause the Security Deposit to be at a commercially reasonable level based on such change in financial condition. Lessor shall not be required to keep the Security Deposit separate from its general accounts. Within 90 days after the expiration or termination of this Lease, Lessor shall return that portion of the Security Deposit not used or applied by Lessor. No part of the Security Deposit shall be considered to be held in trust, to bear interest or to be prepayment for any monies to be paid by Lessee under this Lease.

6. **Use.**

6.1 **Use.** Lessee shall use and occupy the Premises only for the Agreed Use, or any other legal use which is reasonably comparable thereto, and for no other purpose. Lessee shall not use or permit the use of the Premises in a manner that is unlawful, creates damage, waste or a nuisance, or that disturbs occupants of or causes damage to neighboring premises or properties. Other than guide, signal and seeing eye dogs, Lessee shall not keep or allow in the Premises any pets, animals, birds, fish, or reptiles. Lessor shall not unreasonably withhold or delay its consent to any written request for a modification of the Agreed Use, so long as the same will not impair the structural integrity of the Building or the mechanical or electrical systems therein, and/or is not significantly more burdensome to the Project. If Lessor elects to withhold consent, Lessor shall within 7 days after such request give written notification of same, which notice shall include an explanation of Lessor's objections to the change in the Agreed Use.

6.2 **Hazardous Substances**.

(a) **Reportable Uses Require Consent**. The term **"Hazardous Substance"** as used in this Lease shall mean any product, substance, or waste whose presence, use, manufacture, disposal, transportation, or release, either by itself or in combination with other materials expected to be on the Premises, is either: (i) potentially injurious to the public health, safety or welfare, the environment or the Premises, (ii) regulated or monitored by any governmental authority, or (iii) a basis for potential liability of Lessor to any governmental agency or third party under any applicable statute or common law theory. Hazardous Substances shall include, but not be limited to, hydrocarbons, petroleum, gasoline, and/or crude oil or any products, by-products or fractions thereof. Lessee shall not engage in any activity in or on the Premises which constitutes a Reportable Use of Hazardous Substances without the express prior written consent of Lessor and timely compliance (at Lessee's expense) with all Applicable Requirements. **"Reportable Use"** shall mean (i) the installation or use of any above or below ground storage tank, (ii) the generation, possession, storage, use, transportation, or disposal of a Hazardous Substance that requires a permit from, or with respect to which a report, notice, registration or business plan is required to be filed with, any governmental authority, and/or (iii) the presence at the Premises of a Hazardous Substance with respect to which any Applicable Requirements requires that a notice be given to persons entering or occupying the Premises or neighboring properties. Notwithstanding the foregoing, Lessee may use any ordinary and customary materials reasonably required to be used in the normal course of the Agreed Use, ordinary office supplies (copier toner, liquid paper, glue, etc.) and common household cleaning materials, so long as such use is in compliance with all Applicable Requirements, is not a Reportable Use, and does not expose the Premises or neighboring property to any meaningful risk of contamination or damage or expose Lessor to any liability therefor. In addition, Lessor may condition its consent to any Reportable Use upon receiving such additional assurances as Lessor reasonably deems necessary to protect itself, the public, the Premises and/or the environment against damage, contamination, injury and/or liability, including, but not limited to, the installation (and removal on or before Lease expiration or termination) of protective modifications (such as concrete encasements) and/or increasing the Security Deposit.

(b) **Duty to Inform Lessor**. If Lessee knows, or has reasonable cause to believe, that a Hazardous Substance has come to be located in, on, under or about the Premises, other than as previously consented to by Lessor, Lessee shall immediately give written notice of such fact to Lessor, and provide Lessor with a copy of any report, notice, claim or other documentation which it has concerning the presence of such Hazardous Substance.

(c) **Lessee Remediation**. Lessee shall not cause or permit any Hazardous Substance to be spilled or released in, on, under, or about the Premises (including through the plumbing or sanitary sewer system) and shall promptly, at Lessee's expense, comply with all Applicable Requirements and take all investigatory and/or remedial action reasonably recommended, whether or not formally ordered or required, for the cleanup of any contamination of, and for the maintenance, security and/or monitoring of the Premises or neighboring properties, that was caused or materially contributed to by Lessee, or pertaining to or involving any Hazardous Substance brought onto the Premises during the term of this Lease, by or for Lessee, or any third party.

(d) **Lessee Indemnification**. Lessee shall indemnify, defend and hold Lessor, its agents, employees, lenders and ground lessor, if any, harmless from and against any and all loss of rents and/or damages, liabilities, judgments, claims, expenses, penalties, and attorneys' and consultants' fees arising out of or involving any Hazardous Substance brought onto the Premises by or for Lessee, or any third party (provided, however, that Lessee shall have no liability under this Lease with respect to underground migration of any Hazardous Substance under the Premises from areas outside of the Project not caused or contributed to by Lessee). Lessee's obligations shall include, but not be limited to, the effects of any contamination or injury to person, property or the environment created or suffered by Lessee, and the cost of investigation, removal, remediation, restoration and/or abatement, and shall survive the expiration or termination of this Lease. No termination, cancellation or release agreement entered into by Lessor and Lessee shall release Lessee from its obligations under this Lease with respect to Hazardous Substances, unless specifically so agreed by Lessor in writing at the time of such agreement.

(e) **Lessor Indemnification**. Lessor and its successors and assigns shall indemnify, defend, reimburse and hold Lessee, its employees and lenders, harmless from and against any and all environmental damages, including the cost of remediation, which are suffered as a direct result of Hazardous Substances on the Premises prior to Lessee taking possession or which are caused by the gross negligence or willful misconduct of Lessor, its agents or employees. Lessor's obligations, as and when required by the Applicable Requirements, shall include, but not be limited to, the cost of investigation, removal, remediation, restoration and/or abatement, and shall survive the expiration or termination of this Lease.

(f) **Investigations and Remediations**. Lessor shall retain the responsibility and pay for any investigations or remediation measures required by governmental entities having jurisdiction with respect to the existence of Hazardous Substances on the Premises prior to the Lessee taking possession, unless such remediation measure is required as a result of Lessee's use (including "Alterations", as defined in paragraph 7.3(a) below) of the Premises, in which event Lessee shall be responsible for such payment. Lessee shall cooperate fully in any such activities at the request of Lessor, including allowing Lessor and Lessor's agents to have reasonable access to the Premises at reasonable times in order to carry out Lessor's investigative and remedial responsibilities.

(g) **Lessor Termination Option**. If a Hazardous Substance Condition (see Paragraph 9.1(e)) occurs during the term of this Lease, unless Lessee is legally responsible therefor (in which case Lessee shall make the investigation and remediation thereof required by the Applicable Requirements and this Lease shall continue in full force and effect, but subject to Lessor's rights under Paragraph 6.2(d) and Paragraph 13), Lessor may, at Lessor's option, either (i) investigate and remediate such Hazardous Substance Condition, if required, as soon as reasonably possible at Lessor's expense, in which event this Lease shall continue in full force and effect, or (ii) if the estimated cost to remediate such condition exceeds 12 times the then monthly Base Rent or $100,000, whichever is greater, give written notice to Lessee, within 30 days after receipt by Lessor of knowledge of the occurrence of such Hazardous Substance Condition, of Lessor's desire to terminate this Lease as of the date 60 days following the date of such notice. In the event Lessor elects to give a termination notice, Lessee may, within 10 days thereafter, give written notice to Lessor of Lessee's commitment to pay the amount by which the cost of the remediation of such Hazardous Substance Condition exceeds an amount equal to 12 times the then monthly Base Rent or $100,000, whichever is greater. Lessee shall provide Lessor with said funds or satisfactory assurance thereof within 30 days following such commitment. In such event, this Lease shall continue in full force and effect, and Lessor shall proceed to make such remediation as soon as reasonably possible after the required funds are available. If Lessee does not give such notice and provide the required funds or assurance thereof within the time provided, this Lease shall terminate as of the date specified in Lessor's notice of termination.

6.3 **Lessee's Compliance with Applicable Requirements**. Except as otherwise provided in this Lease, Lessee shall, at Lessee's sole expense, fully, diligently and in a timely manner, materially comply with all Applicable Requirements, the requirements of any applicable fire insurance underwriter or rating bureau, and the recommendations of Lessor's engineers and/or consultants which relate in any manner to such Requirements, without regard to whether said Requirements are now in effect or become effective after the Start Date. Lessee shall, within 10 days after receipt of Lessor's written request, provide Lessor with copies of all permits and other documents, and other information evidencing Lessee's compliance with any Applicable Requirements specified by Lessor, and shall immediately upon receipt, notify Lessor in writing (with copies of any documents involved) of any threatened or actual claim, notice, citation, warning, complaint or report pertaining to or involving the failure of Lessee or the Premises to comply with any Applicable Requirements. Likewise, Lessee shall immediately give written notice to Lessor of: (i) any water damage to the Premises and any suspected seepage, pooling, dampness or other condition conducive to the production of mold; or (ii) any mustiness or other odors that might indicate the presence of mold in the Premises.

6.4 **Inspection; Compliance**. Lessor and Lessor's "**Lender**" (as defined in Paragraph 30) and consultants shall have the right to enter into Premises at any time, in the case of an emergency, and otherwise at reasonable times after reasonable notice, for the purpose of inspecting the condition of the Premises and for verifying compliance by Lessee with this Lease. The cost of any such inspections shall be paid by Lessor, unless a violation of Applicable Requirements, or a Hazardous Substance Condition (see Paragraph 9.1) is found to exist or be imminent, or the inspection is requested or ordered by a governmental authority. In such case, Lessee shall upon request reimburse Lessor for the cost of such inspection, so long as such inspection is reasonably related to the violation or contamination. In addition, Lessee shall provide copies of all relevant material safety data sheets (**MSDS**) to Lessor within 10 days of the receipt of written request therefor.

7. **Maintenance; Repairs, Utility Installations; Trade Fixtures and Alterations**.

7.1 **Lessee's Obligations**.

(a) **In General**. Subject to the provisions of Paragraph 2.2 (Condition), 2.3 (Compliance), 6.3 (Lessee's Compliance with Applicable Requirements), 7.2 (Lessor's Obligations), 9 (Damage or Destruction), and 14 (Condemnation), Lessee shall, at Lessee's sole expense, keep the Premises, Utility Installations (intended for Lessee's exclusive use, no matter where located), and Alterations in good order, condition and repair (whether or not the portion of the Premises requiring repairs, or the means of repairing the same, are reasonably or readily accessible to Lessee, and whether or not the need for such repairs occurs as a result of Lessee's use, any prior use, the elements or the age of such portion of the Premises), including, but not limited to, all equipment or facilities, such as plumbing, HVAC equipment, electrical, lighting facilities, boilers, pressure vessels, fixtures, interior walls, interior surfaces of exterior walls, ceilings, floors, windows, doors, plate glass, and skylights but excluding any items which are the responsibility of Lessor pursuant to Paragraph 7.2. Lessee, in keeping the Premises in good order, condition and repair, shall exercise and perform good maintenance practices, specifically including the procurement and maintenance of the service contracts required by Paragraph 7.1(b) below. Lessee's obligations shall include restorations, replacements or renewals when necessary to keep the Premises and all improvements thereon or a part thereof in good order, condition and state of repair.

(b) **Service Contracts**. Lessee shall, at Lessee's sole expense, procure and maintain contracts, with copies to Lessor, in customary form and substance for, and with contractors specializing and experienced in the maintenance of the following equipment and improvements, if any, if and when installed on the Premises: (i) HVAC equipment, (ii) boiler and pressure vessels, and (iii) clarifiers. However, Lessor reserves the right, upon notice to Lessee, to procure and maintain any or all of such service contracts, and Lessee shall reimburse Lessor, upon demand, for the cost thereof.

(c) **Failure to Perform**. If Lessee fails to perform Lessee's obligations under this Paragraph 7.1, Lessor may enter upon the Premises after 10 days' prior written notice to Lessee (except in the case of an emergency, in which case no notice shall be required), perform such obligations on Lessee's behalf, and put the Premises in good order, condition and repair, and Lessee shall promptly pay to Lessor a sum equal to 115% of the cost thereof.

(d) **Replacement**. Subject to Lessee's indemnification of Lessor as set forth in Paragraph 8.7 below, and without relieving Lessee of liability resulting from Lessee's failure to exercise and perform good maintenance practices, if an item described in Paragraph 7.1(b) cannot be repaired other than at a cost which is in excess of 50% of the cost of replacing such item, then such item shall be replaced by Lessor, and the cost thereof shall be prorated between the Parties and Lessee shall only be obligated to pay, each month during the remainder of the term of this Lease, on the date on which Base Rent is due, an amount equal to the product of multiplying the cost of such replacement by a fraction, the numerator of which is one, and the denominator of which is 144 (ie. 1/144th of the cost per month). Lessee shall pay Interest on the unamortized balance but may prepay its obligation at any time.

7.2 **Lessor's Obligations**. Subject to the provisions of Paragraphs 2.2 (Condition), 2.3 (Compliance), 4.2 (Common Area Operating Expenses), 6 (Use), 7.1 (Lessee's Obligations), 9 (Damage or Destruction) and 14 (Condemnation), Lessor, subject to reimbursement pursuant to Paragraph 4.2, shall keep in good order, condition and repair the foundations, exterior walls, structural condition of interior bearing walls, exterior roof, fire sprinkler system, Common Area fire alarm and/or smoke detection systems, fire hydrants, parking lots, walkways, parkways, driveways, landscaping, fences, signs and utility systems serving the Common Areas and all parts thereof, as well as providing the services for which there is a Common Area Operating Expense pursuant to Paragraph 4.2. Lessor shall not be obligated to paint the exterior or interior surfaces of exterior walls nor shall Lessor be obligated to maintain, repair or replace windows, doors or plate glass of the Premises. Lessee expressly waives the benefit of any statute now or hereafter in effect to the extent it is inconsistent with the terms of this Lease.

7.3 **Utility Installations; Trade Fixtures; Alterations**.

(a) **Definitions**. The term **"Utility Installations"** refers to all floor and window coverings, air and/or vacuum lines, power panels, electrical distribution, security and fire protection systems, communication cabling, lighting fixtures, HVAC equipment, plumbing, and fencing in or on the Premises. The term "**Trade Fixtures**" shall mean Lessee's machinery and equipment that can be removed without doing material damage to the Premises. The term "**Alterations**" shall mean any modification of the improvements, other than Utility Installations or Trade Fixtures, whether by addition or deletion. "**Lessee Owned Alterations and/or Utility Installations**" are defined as Alterations and/or Utility Installations made by Lessee that are not yet owned by Lessor pursuant to Paragraph 7.4(a).

(b) **Consent**. Lessee shall not make any Alterations or Utility Installations to the Premises without Lessor's prior written consent. Lessee may, however, make non-structural Utility Installations to the interior of the Premises (excluding the roof) without such consent but upon notice to Lessor, as long as they are not visible from the outside, do not involve puncturing, relocating or removing the roof or any existing walls, will not affect the electrical, plumbing, HVAC, and/or life safety systems, and the cumulative cost thereof during this Lease as extended does not exceed a sum equal to 3 month's Base Rent in the aggregate or a sum equal to one month's Base Rent in any one year. Notwithstanding the foregoing, Lessee shall not make or permit any roof penetrations and/or install anything on the roof without the prior written approval of Lessor. Lessor may, as a precondition to granting such approval, require Lessee to utilize a contractor chosen and/or approved by Lessor. Any Alterations or Utility Installations that Lessee shall desire to make and which require the consent of the Lessor shall be presented to Lessor in written form with detailed plans. Consent shall be deemed conditioned upon Lessee's: (i) acquiring all applicable governmental permits, (ii) furnishing Lessor with copies of both the permits and the plans and specifications prior to commencement of the work, and (iii) compliance with all conditions of said permits and other Applicable Requirements in a prompt and expeditious manner. Any Alterations or Utility Installations shall be performed in a workmanlike manner with good and sufficient materials. Lessee shall promptly upon completion furnish Lessor with as-built plans and specifications. For work which costs an amount in excess of one month's Base Rent, Lessor may condition its consent upon Lessee providing a lien and completion bond in an amount equal to 150% of the estimated cost of such Alteration or Utility Installation and/or upon Lessee's posting an additional Security Deposit with Lessor.

(c) **Liens; Bonds**. Lessee shall pay, when due, all claims for labor or materials furnished or alleged to have been furnished to or for Lessee at or for use on the Premises, which claims are or may be secured by any mechanic's or materialman's lien against the Premises or any interest therein. Lessee shall give Lessor not less than 10 days notice prior to the commencement of any work in, on or about the Premises, and Lessor shall have the right to post notices of non-responsibility. If Lessee shall contest the validity of any such lien, claim or demand, then Lessee shall, at its sole expense defend and protect itself, Lessor and the Premises against the same and shall pay and satisfy any such adverse judgment that may be rendered thereon before the enforcement thereof. If Lessor shall require, Lessee shall furnish a surety bond in an amount equal to 150% of the amount of such contested lien, claim or demand, indemnifying Lessor against liability for the same. If Lessor elects to participate in any such action, Lessee

shall pay Lessor's attorneys' fees and costs. Lessee shall not be responsible for claims and payments related to liens or bonds for labors or materials that are not furnished to Lessee.

7.4 **Ownership; Removal; Surrender; and Restoration**.

(a) **Ownership**. Subject to Lessor's right to require removal or elect ownership as hereinafter provided, all Alterations and Utility Installations made by Lessee shall be the property of Lessee, but considered a part of the Premises. Lessor may, at any time, elect in writing to be the owner of all or any specified part of the Lessee Owned Alterations and Utility Installations. Unless otherwise instructed per paragraph 7.4(b) hereof, all Lessee Owned Alterations and Utility Installations shall, at the expiration or termination of this Lease, become the property of Lessor and be surrendered by Lessee with the Premises.

(b) **Removal**. By delivery to Lessee of written notice from Lessor not earlier than 90 and not later than 30 days prior to the end of the term of this Lease, Lessor may require that any or all Lessee Owned Alterations or Utility Installations be removed by the expiration or termination of this Lease. Lessor may require the removal at any time of all or any part of any Lessee Owned Alterations or Utility Installations made without the required consent.

(c) **Surrender; Restoration**. Lessee shall surrender the Premises by the Expiration Date or any earlier termination date, with all of the improvements, parts and surfaces thereof broom clean and free of debris, and in good operating order, condition and state of repair, ordinary wear and tear excepted. "Ordinary wear and tear" shall not include any damage or deterioration that would have been prevented by good maintenance practice. Notwithstanding the foregoing, if this Lease is for 12 months or less, then Lessee shall surrender the Premises in the same condition as delivered to Lessee on the Start Date with NO allowance for ordinary wear and tear. Lessee shall repair any damage occasioned by the installation, maintenance or removal of Trade Fixtures, Lessee owned Alterations and/or Utility Installations, furnishings, and equipment as well as the removal of any storage tank installed by or for Lessee. Lessee shall also completely remove from the Premises any and all Hazardous Substances brought onto the Premises by or for Lessee, or any third party (except Hazardous Substances which were deposited via underground migration from areas outside of the Project) even if such removal would require Lessee to perform or pay for work that exceeds statutory requirements. Trade Fixtures shall remain the property of Lessee and shall be removed by Lessee. Any personal property of Lessee not removed on or before the Expiration Date or any earlier termination date shall be deemed to have been abandoned by Lessee and may be disposed of or retained by Lessor as Lessor may desire. The failure by Lessee to timely vacate the Premises pursuant to this Paragraph 7.4(c) without the express written consent of Lessor shall constitute a holdover under the provisions of Paragraph 26 below.

8. **Insurance; Indemnity**.

8.1 **Payment of Premiums**. The cost of the premiums for the insurance policies required to be carried by Lessor, pursuant to Paragraphs 8.2(b), 8.3(a) and 8.3(b), shall be a Common Area Operating Expense. Premiums for policy periods commencing prior to, or extending beyond, the term of this Lease shall be prorated to coincide with the corresponding Start Date or Expiration Date.

8.2 **Liability Insurance**.

(a) **Carried by Lessee**. Lessee shall obtain and keep in force a Commercial General Liability policy of insurance protecting Lessee and Lessor as an additional insured against claims for bodily injury, personal injury and property damage based upon or arising out of the ownership, use, occupancy or maintenance of the Premises and all areas appurtenant thereto. Such insurance shall be on an occurrence basis providing single limit coverage in an amount not less than $1,000,000 per occurrence with an annual aggregate of not less than $2,000,000. Lessee shall add Lessor as an additional insured by means of an endorsement at least as broad as the Insurance Service Organization's "Additional Insured-Managers or Lessors of Premises" Endorsement. The policy shall not contain any intra-insured exclusions as between insured persons or organizations, but shall include coverage for liability assumed under this Lease as an "**insured contract**" for the performance of Lessee's indemnity obligations under this Lease. The limits of said insurance shall not, however, limit the liability of Lessee nor relieve Lessee of any obligation hereunder. Lessee shall provide an endorsement on its liability policy(ies) which provides that its insurance shall be primary to and not contributory with any similar insurance carried by Lessor, whose insurance shall be considered excess insurance only.

(b) **Carried by Lessor**. Lessor shall maintain liability insurance as described in Paragraph 8.2(a), in addition to, and not in lieu of, the insurance required to be maintained by Lessee. Lessee shall not be named as an additional insured therein.

8.3 **Property Insurance - Building, Improvements and Rental Value**.

(a) **Building and Improvements**. Lessor shall obtain and keep in force a policy or policies of insurance in the name of Lessor, with loss payable to Lessor, any ground-lessor, and to any Lender insuring loss or damage to the Premises. The amount of such insurance shall be equal to the full insurable replacement cost of the Premises, as the same shall exist from time to time, or the amount required by any Lender, but in no event more than the commercially reasonable and available insurable value thereof. Lessee Owned Alterations and Utility Installations, Trade Fixtures, and Lessee's personal property shall be insured by Lessee not by Lessor. If the coverage is available and commercially appropriate, such policy or policies shall insure against all risks of direct physical loss or damage (except the perils of flood and/or earthquake unless required by a Lender), including coverage for debris removal and the enforcement of any Applicable Requirements requiring the upgrading, demolition, reconstruction or replacement of any portion of the Premises as the result of a covered loss. Said policy or policies shall also contain an agreed valuation provision in lieu of any coinsurance clause, waiver of subrogation, and inflation guard protection causing an increase in the annual property insurance coverage amount by a factor of not less than the adjusted U.S. Department of Labor Consumer Price Index for All Urban Consumers for the city nearest to where the Premises are located. If such insurance coverage has a deductible clause, the deductible amount shall not exceed $1,000 per occurrence.

(b) **Rental Value**. Lessor shall also obtain and keep in force a policy or policies in the name of Lessor with loss payable to Lessor and any Lender, insuring the loss of the full Rent for one year with an extended period of indemnity for an additional 180 days ("Rental Value insurance"). Said insurance shall contain an agreed valuation provision in lieu of any coinsurance clause, and the amount of coverage shall be adjusted annually to reflect the projected Rent otherwise payable by Lessee, for the next 12 month period.

(c) **Adjacent Premises**. Lessee shall pay for any increase in the premiums for the property insurance of the Building and for the Common Areas or other buildings in the Project if said increase is caused by Lessee's acts, omissions, use or occupancy of the Premises.

(d) **Lessee's Improvements**. Since Lessor is the Insuring Party, Lessor shall not be required to insure Lessee Owned Alterations and Utility Installations unless the item in question has become the property of Lessor under the terms of this Lease.

8.4 **Lessee's Property; Business Interruption Insurance**.

(a) **Property Damage**. Lessee shall obtain and maintain insurance coverage on all of Lessee's personal property, Trade Fixtures, and Lessee Owned Alterations and Utility Installations. Such insurance shall be full replacement cost coverage with a deductible of not to exceed $1,000 per occurrence. The proceeds from any such insurance shall be used by Lessee for the replacement of personal property, Trade Fixtures and Lessee Owned Alterations and Utility Installations. Lessee shall provide Lessor with written evidence that such insurance is in force.

(b) **Business Interruption**. Lessee shall obtain and maintain loss of income and extra expense insurance in amounts as will reimburse Lessee for direct or indirect loss of earnings attributable to all perils commonly insured against by prudent lessees in the business of Lessee or attributable to prevention of access to the Premises as a result of such perils.

(c) **No Representation of Adequate Coverage**. Lessor makes no representation that the limits or forms of coverage of insurance specified herein are adequate to cover Lessee's property, business operations or obligations under this Lease.

8.5 **Insurance Policies**. Insurance required herein shall be by companies duly licensed or admitted to transact business in the state where the Premises are located, and maintaining during the policy term a "General Policyholders Rating" of at least A-, VI, as set forth in the most current issue of "Best's Insurance Guide", or such other rating as may be required by a Lender. Lessee shall not do or permit to be done anything which invalidates the required insurance policies. Lessee shall, prior to the Start Date, deliver to Lessor certified copies of policies of such insurance or certificates evidencing the existence and amounts of the required insurance. No such policy shall be cancelable or subject to modification except after 30 days prior written notice to Lessor. Lessee shall, at least 10 days prior to the expiration of such policies, furnish Lessor with evidence of renewals or "insurance binders" evidencing renewal thereof, or Lessor may order such insurance and charge the cost thereof to Lessee, which amount shall be payable by Lessee to Lessor upon demand. Such policies shall be for a term of at least one year, or the length of the remaining term of this Lease, whichever is less. If either Party shall fail to procure and maintain the insurance required to be carried by it, the other Party may, but shall not be required to, procure and maintain the same.

8.6 **Waiver of Subrogation**. Without affecting any other rights or remedies, Lessee and Lessor each hereby release and relieve the other, and waive their entire right to recover damages against the other, for loss of or damage to its property arising out of or incident to the perils required to be insured against herein. The effect of such releases and waivers is not limited by the amount of insurance carried or required, or by any deductibles applicable hereto. The Parties agree to have their respective property damage insurance carriers waive any right to subrogation that such companies may have against Lessor or Lessee, as the case may be, so long as the insurance is not invalidated thereby.

8.7 **Indemnity**. Except for Lessor's gross negligence or willful misconduct, Lessee shall indemnify, protect, defend and hold harmless the Premises, Lessor and its agents, Lessor's master or ground lessor, partners and Lenders, from and against any and all claims, loss of rents and/or damages, liens, judgments, penalties, attorneys' and consultants' fees, expenses and/or liabilities arising out of, involving, or in connection with, the use and/or occupancy of the Premises by Lessee. If any action or proceeding is brought against Lessor by reason of any of the foregoing matters, Lessee shall upon notice defend the same at Lessee's expense by counsel reasonably satisfactory to Lessor and Lessor shall cooperate with Lessee in such defense. Lessor need not have first paid any such claim in order to be defended or indemnified.

8.8 **Exemption of Lessor and its Agents from Liability**. Notwithstanding the negligence or breach of this Lease by Lessor or its agents, neither Lessor nor its agents shall be liable under any circumstances for: (i) injury or damage to the person or goods, wares, merchandise or other property of Lessee, Lessee's employees, contractors, invitees, customers, or any other person in or about the Premises, whether such damage or injury is caused by or results from fire, steam, electricity, gas, water or rain, indoor air quality, the presence of mold or from the breakage, leakage, obstruction or other defects of pipes, fire sprinklers, wires, appliances, plumbing, HVAC or lighting fixtures, or from any other cause, whether the said injury or damage results from conditions arising upon the Premises or upon other portions of the Building, or from other sources or places, (ii) any damages arising from any act or neglect of any other tenant of Lessor or from the failure of Lessor or its agents to enforce the provisions of any other lease in the Project, or (iii) injury to Lessee's business or for any loss of income or profit therefrom. Instead, it is intended that Lessee's sole recourse in the event of such damages or injury be to file a claim on the insurance policy(ies) that Lessee is required to maintain pursuant to the provisions of paragraph 8.

8.9 **Failure to Provide Insurance.** Lessee acknowledges that any failure on its part to obtain or maintain the insurance required herein will expose Lessor to risks and potentially cause Lessor to incur costs not contemplated by this Lease, the extent of which will be extremely difficult to ascertain. Accordingly, for any month or portion thereof that Lessee does not maintain the required insurance and/or does not provide Lessor with the required binders or certificates evidencing the existence of the required insurance, the Base Rent shall be automatically increased, without any requirement for notice to Lessee, by an amount equal to 10% of the then existing Base Rent or $100, whichever is greater. The parties agree that such increase in Base Rent represents fair and reasonable compensation for the additional risk/costs that Lessor will incur by reason of Lessee's failure to maintain the required insurance. Such increase in Base Rent shall in no event constitute a waiver of Lessee's Default or Breach with respect to the failure to maintain such insurance, prevent the exercise of any of the other rights and remedies granted hereunder, nor relieve Lessee of its obligation to maintain the insurance specified in this Lease.

9. **Damage or Destruction**.

9.1 **Definitions**.

(a) **"Premises Partial Damage"** shall mean damage or destruction to the improvements on the Premises, other than Lessee Owned Alterations and Utility Installations, which can reasonably be repaired in 3 months or less from the date of the damage or destruction, and the cost thereof does not exceed a sum equal to 6 month's Base Rent. Lessor shall notify Lessee in writing within 30 days from the date of the damage or destruction as to whether or not the damage is Partial or Total. Notwithstanding the foregoing, Premises Partial Damage shall not include damage to windows, doors, and/or other similar items which Lessee has the responsibility to repair or replace pursuant to the provisions of Paragraph 7.1.

(b) **"Premises Total Destruction"** shall mean damage or destruction to the improvements on the Premises, other than Lessee Owned Alterations and Utility Installations and Trade Fixtures, which cannot reasonably be repaired in 3 months or less from the date of the damage or destruction and/or the cost thereof exceeds a sum equal to 6 month's Base Rent. Lessor shall notify Lessee in writing within 30 days from the date of the damage or destruction as to whether or not the damage is Partial or Total.

(c) **"Insured Loss"** shall mean damage or destruction to improvements on the Premises, other than Lessee Owned Alterations and Utility Installations and Trade Fixtures, which was caused by an event required to be covered by the insurance described in Paragraph 8.3(a), irrespective of any deductible amounts or coverage limits involved.

(d) **"Replacement Cost"** shall mean the cost to repair or rebuild the improvements owned by Lessor at the time of the occurrence to their condition existing immediately prior thereto, including demolition, debris removal and upgrading required by the operation of Applicable Requirements, and without deduction for depreciation.

(e) **"Hazardous Substance Condition"** shall mean the occurrence or discovery of a condition involving the presence of, or a contamination by, a Hazardous Substance, in, on, or under the Premises which requires restoration.

9.2 **Partial Damage - Insured Loss**. If a Premises Partial Damage that is an Insured Loss occurs, then Lessor shall, at Lessor's expense, repair such damage (but not Lessee's Trade Fixtures or Lessee Owned Alterations and Utility Installations) as soon as reasonably possible and this Lease shall continue in full force and effect; provided, however, that Lessee shall, at Lessor's election, make the repair of any damage or destruction the total cost to repair of which is $10,000 or less, and, in such event, Lessor shall make any applicable insurance proceeds available to Lessee on a reasonable basis for that purpose. Notwithstanding the foregoing, if the required insurance was not in force or the insurance proceeds are not sufficient to effect such repair, the Insuring Party shall promptly contribute the shortage in proceeds as and when required to complete said repairs. In the event, however, such shortage was due to the fact that, by reason of the unique nature of the improvements, full replacement cost insurance coverage was not commercially reasonable and

available, Lessor shall have no obligation to pay for the shortage in insurance proceeds or to fully restore the unique aspects of the Premises unless Lessee provides Lessor with the funds to cover same, or adequate assurance thereof, within 10 days following receipt of written notice of such shortage and request therefor. If Lessor receives said funds or adequate assurance thereof within said 10 day period, the party responsible for making the repairs shall complete them as soon as reasonably possible and this Lease shall remain in full force and effect. If such funds or assurance are not received, Lessor may nevertheless elect by written notice to Lessee within 10 days thereafter to: (i) make such restoration and repair as is commercially reasonable with Lessor paying any shortage in proceeds, in which case this Lease shall remain in full

force and effect, or (ii) have this Lease terminate 30 days thereafter. Lessee shall not be entitled to reimbursement of any funds contributed by Lessee to repair any such damage or destruction. Premises Partial Damage due to flood or earthquake shall be subject to Paragraph 9.3, notwithstanding that there may be some insurance coverage, but the net proceeds of any such insurance shall be made available for the repairs if made by either Party.

9.3 **Partial Damage - Uninsured Loss**. If a Premises Partial Damage that is not an Insured Loss occurs, unless caused by a negligent or willful act of Lessee (in which event Lessee shall make the repairs at Lessee's expense), Lessor may either: (i) repair such damage as soon as reasonably possible at Lessor's expense, in which event this Lease shall continue in full force and effect, or (ii) terminate this Lease by giving written notice to Lessee within 30 days after receipt by Lessor of knowledge of the occurrence of such damage. Such termination shall be effective 60 days following the date of such notice. In the event Lessor elects to terminate this Lease, Lessee shall have the right within 10 days after receipt of the termination notice to give written notice to Lessor of Lessee's commitment to pay for the repair of such damage without reimbursement from Lessor. Lessee shall provide Lessor with said funds or satisfactory assurance thereof within 30 days after making such commitment. In such event this Lease shall continue in full force and effect, and Lessor shall proceed to make such repairs as soon as reasonably possible after the required funds are available. If Lessee does not make the required commitment, this Lease shall terminate as of the date specified in the termination notice.

9.4 **Total Destruction**. Notwithstanding any other provision hereof, if a Premises Total Destruction occurs, this Lease shall terminate 60 days following such Destruction. If the damage or destruction was caused by the gross negligence or willful misconduct of Lessee, Lessor shall have the right to recover Lessor's damages from Lessee, except as provided in Paragraph 8.6.

9.5 **Damage Near End of Term**. If at any time during the last 6 months of this Lease there is damage for which the cost to repair exceeds one month's Base Rent, whether or not an Insured Loss, Lessor may terminate this Lease effective 60 days following the date of occurrence of such damage by giving a written termination notice to Lessee within 30 days after the date of occurrence of such damage. Notwithstanding the foregoing, if Lessee at that time has an exercisable option to extend this Lease or to purchase the Premises, then Lessee may preserve this Lease by, (a) exercising such option and (b) providing Lessor with any shortage in insurance proceeds (or adequate assurance thereof) needed to make the repairs on or before the earlier of (i) the date which is 10 days after Lessee's receipt of Lessor's written notice purporting to terminate this Lease, or (ii) the day prior to the date upon which such option expires. If Lessee duly exercises such option during such period and provides Lessor with funds (or adequate assurance thereof) to cover any shortage in insurance proceeds, Lessor shall, at Lessor's commercially reasonable expense, repair such damage as soon as reasonably possible and this Lease shall continue in full force and effect. If Lessee fails to exercise such option and provide such funds or assurance during such period, then this Lease shall terminate on the date specified in the termination notice and Lessee's option shall be extinguished.

9.6 **Abatement of Rent; Lessee's Remedies**.

(a) **Abatement**. In the event of Premises Partial Damage or Premises Total Destruction or a Hazardous Substance Condition for which Lessee is not responsible under this Lease, the Rent payable by Lessee for the period required for the repair, remediation or restoration of such damage shall be abated in proportion to the degree to which Lessee's use of the Premises is impaired, but not to exceed the proceeds received from the Rental Value insurance. All other obligations of Lessee hereunder shall be performed by Lessee, and Lessor shall have no liability for any such damage, destruction, remediation, repair or restoration except as provided herein.

(b) **Remedies**. If Lessor is obligated to repair or restore the Premises and does not commence, in a substantial and meaningful way, such repair or restoration within 90 days after such obligation shall accrue, Lessee may, at any time prior to the commencement of such repair or restoration, give written notice to Lessor and to any Lenders of which Lessee has actual notice, of Lessee's election to terminate this Lease on a date not less than 60 days following the giving of such notice. If Lessee gives such notice and such repair or restoration is not commenced within 30 days thereafter, this Lease shall terminate as of the date specified in said notice. If the repair or restoration is commenced within such 30 days, this Lease shall continue in full force and effect. "Commence" shall mean either the unconditional authorization of the preparation of the required plans, or the beginning of the actual work on the Premises, whichever first occurs.

9.7 **Termination; Advance Payments**. Upon termination of this Lease pursuant to Paragraph 6.2(g) or Paragraph 9, an equitable adjustment shall be made concerning advance Base Rent and any other advance payments made by Lessee to Lessor. Lessor shall, in addition, return to Lessee so much of Lessee's Security Deposit as has not been, or is not then required to be, used by Lessor.

10. **Real Property Taxes**.

10.1 **Definition**. As used herein, the term "**Real Property Taxes**" shall include any form of assessment; real estate, general, special, ordinary or extraordinary, or rental levy or tax (other than inheritance, personal income or estate taxes); improvement bond; and/or license fee imposed upon or levied against any legal or equitable interest of Lessor in the Project, Lessor's right to other income therefrom, and/or Lessor's business of leasing, by any authority having the direct or indirect power to tax and where the funds are generated with reference to the Project address and where the proceeds so generated are to be applied by the city, county or other local taxing authority of a jurisdiction within which the Project is located. The term "Real Property Taxes" shall also include any tax, fee, levy, assessment or charge, or any increase therein: (i) imposed by reason of events occurring during the term of this Lease, including but not limited to, a change in the ownership of the Project, (ii) a change in the improvements thereon, and/or (iii) levied or assessed on machinery or equipment provided by Lessor to Lessee pursuant to this Lease. In calculating Real Property Taxes for any calendar year, the Real Property Taxes for any real estate tax year shall be included in the calculation of Real Property Taxes for such calendar year based upon the number of days which such calendar year and tax year have in common.

10.2 **Payment of Taxes**. Except as otherwise provided in Paragraph 10.3, Lessor shall pay the Real Property Taxes applicable to the Project, and said payments shall be included in the calculation of Common Area Operating Expenses in accordance with the provisions of Paragraph 4.2.

10.3 **Additional Improvements**. Common Area Operating Expenses shall not include Real Property Taxes specified in the tax assessor's records and work sheets as being caused by additional improvements placed upon the Project by other lessees or by Lessor for the exclusive enjoyment of such other lessees. Notwithstanding Paragraph 10.2 hereof, Lessee shall, however, pay to Lessor at the time Common Area Operating Expenses are payable under Paragraph 4.2, the entirety of any increase in Real Property Taxes if assessed solely by reason of Alterations, Trade Fixtures or Utility Installations placed upon the Premises by Lessee or at Lessee's request or by reason of any alterations or improvements to the Premises made by Lessor subsequent to the execution of this Lease by the Parties.

10.4 **Joint Assessment**. If the Building is not separately assessed, Real Property Taxes allocated to the Building shall be an equitable proportion of the Real Property Taxes for all of the land and improvements included within the tax parcel assessed, such proportion to be determined by Lessor from the respective valuations assigned in the assessor's work sheets or such other information as may be reasonably available. Lessor's reasonable determination thereof, in good faith, shall be conclusive.

10.5 **Personal Property Taxes**. Lessee shall pay prior to delinquency all taxes assessed against and levied upon Lessee Owned Alterations and Utility Installations, Trade Fixtures, furnishings, equipment and all personal property of Lessee contained in the Premises. When possible, Lessee shall cause its Lessee Owned Alterations and Utility Installations, Trade Fixtures, furnishings, equipment and all other personal property to be assessed and billed separately from the real property of Lessor. If any of Lessee's said property shall be assessed with Lessor's real property, Lessee shall pay Lessor the taxes attributable to Lessee's property within 10 days after receipt of a written statement setting forth the taxes applicable to Lessee's property.

11. **Utilities and Services**. Lessee shall pay for all water, gas, heat, light, power, telephone, trash disposal and other utilities and services supplied to the Premises, together with any taxes thereon. Notwithstanding the provisions of Paragraph 4.2, if at any time in Lessor's sole judgment, Lessor determines that Lessee is using a disproportionate amount of water, electricity or other commonly metered utilities, or that Lessee is generating such a large volume of trash as to require an increase in the size of the trash receptacle and/or an increase in the number of times per month that it is emptied, then Lessor may increase Lessee's Base Rent by an amount equal to such increased costs. There shall be no abatement of Rent and Lessor shall not be liable in any respect whatsoever for the inadequacy, stoppage, interruption or discontinuance of any utility or service due to riot, strike, labor dispute, breakdown, accident, repair or other cause beyond Lessor's reasonable control or in cooperation with governmental request or directions.

12. **Assignment and Subletting**.

12.1 **Lessor's Consent Required**.

(a) Lessee shall not voluntarily or by operation of law assign, transfer, mortgage or encumber (collectively, **"assign or assignment"**) or sublet all or any part of Lessee's interest in this Lease or in the Premises without Lessor's prior written consent and such consent shall not be reasonably withheld.

(b) Unless Lessee is a corporation and its stock is publicly traded on a national stock exchange, a change in the control of Lessee shall constitute an assignment requiring consent. The transfer, on a cumulative basis, of 49% or more of the voting control of Lessee shall constitute a change in control for this purpose.

(c) The involvement of Lessee or its assets in any transaction, or series of transactions (by way of merger, sale, acquisition, financing, transfer, leveraged buy-out or otherwise), whether or not a formal assignment or hypothecation of this Lease or Lessee's assets occurs, which results or will result in a reduction of the Net Worth of Lessee by an amount greater than 49% of such Net Worth as it was represented at the time of the execution of this Lease or at the time of the most recent assignment to which Lessor has consented, or as it exists immediately prior to said transaction or transactions constituting such reduction, whichever was or is greater, shall be considered an assignment of this Lease to which Lessor may withhold its consent. **"Net Worth of Lessee"** shall mean the net worth of Lessee (excluding any guarantors) established under generally accepted accounting principles.

(d) An assignment or subletting without consent shall, at Lessor's option, be a Default curable after notice per Paragraph 13.1(c), or a noncurable Breach without the necessity of any notice and grace period. If Lessor elects to treat such unapproved assignment or subletting as a noncurable Breach, Lessor may either: (i) terminate this Lease, or (ii) upon 30 days written notice, increase the monthly Base Rent to 110% of the Base Rent then in effect. Further, in the event of such Breach and rental adjustment, (i) the purchase price of any option to purchase the Premises held by Lessee shall be subject to similar adjustment to 110% of the price previously in effect, and (ii) all fixed and non-fixed rental adjustments scheduled during the remainder of the Lease term shall be increased to 110% of the scheduled adjusted rent.

(e) Lessee's remedy for any breach of Paragraph 12.1 by Lessor shall be limited to compensatory damages and/or injunctive relief.

(f) Lessor may reasonably withhold consent to a proposed assignment or subletting if Lessee is in Default at the time consent is requested.

(g) Notwithstanding the foregoing, allowing a de minimis portion of the Premises, ie. 20 square feet or less, to be used by a third party vendor in connection with the installation of a vending machine or payphone shall not constitute a subletting.

12.2 **Terms and Conditions Applicable to Assignment and Subletting**.

(a) Regardless of Lessor's consent, no assignment or subletting shall: (i) be effective without the express written assumption by such assignee or sublessee of the obligations of Lessee under this Lease, (ii) release Lessee of any obligations hereunder, or (iii) alter the primary liability of Lessee for the payment of Rent or for the performance of any other obligations to be performed by Lessee.

(b) Lessor may accept Rent or performance of Lessee's obligations from any person other than Lessee pending approval or disapproval of an assignment. Neither a delay in the approval or disapproval of such assignment nor the acceptance of Rent or performance shall constitute a waiver or estoppel of Lessor's right to exercise its remedies for Lessee's Default or Breach.

(c) Lessor's consent to any assignment or subletting shall not constitute consent to any subsequent assignment or subletting.

(d) In the event of any Default or Breach by Lessee, Lessor may proceed directly against Lessee, any Guarantors or anyone else responsible for the performance of Lessee's obligations under this Lease, including any assignee or sublessee, without first exhausting Lessor's remedies against any other person or entity responsible therefore to Lessor, or any security held by Lessor.

(e) Each request for consent to an assignment or subletting shall be in writing, accompanied by information relevant to Lessor's determination as to the financial and operational responsibility and appropriateness of the proposed assignee or sublessee, including but not limited to the intended use and/or required modification of the Premises, if any, together with a fee of $500 as consideration for Lessor's considering and processing said request. Lessee agrees to provide Lessor with such other or additional information and/or documentation as may be reasonably requested. (See also Paragraph 36)
(f) Any assignee of, or sublessee under, this Lease shall, by reason of accepting such assignment, entering into such sublease, or entering into possession of the Premises or any portion thereof, be deemed to have assumed and agreed to conform and comply with each and every term, covenant, condition and obligation herein to be observed or performed by Lessee during the term of said assignment or sublease, other than such obligations as are contrary to or inconsistent with provisions of an assignment or sublease to which Lessor has specifically consented to in writing.

(g) Lessor's consent to any assignment or subletting shall not transfer to the assignee or sublessee any Option granted to the original Lessee by this Lease unless such transfer is specifically consented to by Lessor in writing. (See Paragraph 39.2)

12.3 **Additional Terms and Conditions Applicable to Subletting**. The following terms and conditions shall apply to any subletting by Lessee of all or any part of the Premises and shall be deemed included in all subleases under this Lease whether or not expressly incorporated therein:

(a) Lessee hereby assigns and transfers to Lessor all of Lessee's interest in all Rent payable on any sublease, and Lessor may collect such Rent and apply same toward Lessee's obligations under this Lease; provided, however, that until a Breach shall occur in the performance of Lessee's obligations, Lessee may collect said Rent. In the event that the amount collected by Lessor exceeds Lessee's then outstanding obligations any such excess shall be refunded to Lessee. Lessor shall not, by reason of the foregoing or any assignment of such sublease, nor by reason of the collection of Rent, be deemed liable to the sublessee for any failure of Lessee to perform and comply with any of Lessee's obligations to such sublessee. Lessee hereby irrevocably authorizes and directs any such sublessee, upon receipt of a written notice from Lessor stating that a Breach exists in the performance of Lessee's obligations under this Lease, to pay to Lessor all Rent due and to become due under the sublease. Sublessee shall rely upon any such notice from Lessor and shall pay all Rents to Lessor without any obligation or right to inquire as to whether such Breach exists, notwithstanding any claim from Lessee to the contrary.

(b) In the event of a Breach by Lessee, Lessor may, at its option, require sublessee to attorn to Lessor, in which event Lessor shall undertake the obligations of the sublessor under such sublease from the time of the exercise of said option to the expiration of such sublease; provided, however, Lessor shall not be liable for any prepaid rents or security deposit paid by such sublessee to such sublessor or for any prior Defaults

or Breaches of such sublessor.

(c) Any matter requiring the consent of the sublessor under a sublease shall also require the consent of Lessor.

(d) No sublessee shall further assign or sublet all or any part of the Premises without Lessor's prior written consent.

(e) Lessor shall deliver a copy of any notice of Default or Breach by Lessee to the sublessee, who shall have the right to cure the Default of Lessee within the grace period, if any, specified in such notice. The sublessee shall have a right of reimbursement and offset from and against Lessee for any such Defaults cured by the sublessee.

13. **Default; Breach; Remedies**.

13.1 **Default; Breach**. A **"Default"** is defined as a failure by the Lessee to comply with or perform any of the terms, covenants, conditions or Rules and Regulations under this Lease. A **"Breach"** is defined as the occurrence of one or more of the following Defaults, and the failure of Lessee to cure such Default within any applicable grace period:

(a) The abandonment of the Premises; or the vacating of the Premises without providing a commercially reasonable level of security, or where the coverage of the property insurance described in Paragraph 8.3 is jeopardized as a result thereof, or without providing reasonable assurances to minimize potential vandalism.

(b) The failure of Lessee to make any payment of Rent or any Security Deposit required to be made by Lessee hereunder, whether to Lessor or to a third party, when due, to provide reasonable evidence of insurance or surety bond, or to fulfill any obligation under this Lease which endangers or threatens life or property, where such failure continues for a period of 3 business days following written notice to Lessee. THE ACCEPTANCE BY LESSOR OF A PARTIAL PAYMENT OF RENT OR SECURITY DEPOSIT SHALL NOT CONSTITUTE A WAIVER OF ANY OF LESSOR'S RIGHTS, INCLUDING LESSOR'S RIGHT TO RECOVER POSSESSION OF THE PREMISES.

(c) The failure of Lessee to allow Lessor and/or its agents access to the Premises or the commission of waste, act or acts constituting public or private nuisance, and/or an illegal activity on the Premises by Lessee, where such actions continue for a period of 3 business days following written notice to Lessee.

(d) The failure by Lessee to provide (i) reasonable written evidence of compliance with Applicable Requirements, (ii) the service contracts, (iii) the rescission of an unauthorized assignment or subletting, (iv) an Estoppel Certificate or financial statements, (v) a requested subordination, (vi) evidence concerning any guaranty and/or Guarantor, (vii) any document requested under Paragraph 41, (viii) material data safety sheets (MSDS), or (ix) any other documentation or information which Lessor may reasonably require of Lessee under the terms of this Lease, where any such failure continues for a period of 10 days following written notice to Lessee.

(e) A Default by Lessee as to the terms, covenants, conditions or provisions of this Lease, or of the rules adopted under Paragraph 2.9 hereof, other than those described in subparagraphs 13.1(a), (b), (c) or (d), above, where such Default continues for a period of 30 days after written notice; provided, however, that if the nature of Lessee's Default is such that more than 30 days are reasonably required for its cure, then it shall not be deemed to be a Breach if Lessee commences such cure within said 30 day period and thereafter diligently prosecutes such cure to completion.

(f) The occurrence of any of the following events: (i) the making of any general arrangement or assignment for the benefit of creditors; (ii) becoming a **"debtor"** as defined in 11 U.S.C. § 101 or any successor statute thereto (unless, in the case of a petition filed against Lessee, the same is dismissed within 60 days); (iii) the appointment of a trustee or receiver to take possession of substantially all of Lessee's assets located at the Premises or of Lessee's interest in this Lease, where possession is not restored to Lessee within 30 days; or (iv) the attachment, execution or other judicial seizure of substantially all of Lessee's assets located at the Premises or of Lessee's interest in this Lease, where such seizure is not discharged within 30 days; provided, however, in the event that any provision of this subparagraph is contrary to any applicable law, such provision shall be of no force or effect, and not affect the validity of the remaining provisions.

(g) The discovery that any financial statement of Lessee or of any Guarantor given to Lessor was materially false.

(h) If the performance of Lessee's obligations under this Lease is guaranteed: (i) the death of a Guarantor, (ii) the termination of a Guarantor's liability with respect to this Lease other than in accordance with the terms of such guaranty, (iii) a Guarantor's becoming insolvent or the subject of a bankruptcy filing, (iv) a Guarantor's refusal to honor the guaranty, or (v) a Guarantor's breach of its guaranty obligation on an anticipatory basis, and Lessee's failure, within 60 days following written notice of any such event, to provide written alternative assurance or security, which, when coupled with the then existing resources of Lessee, equals or exceeds the combined financial resources of Lessee and the Guarantors that existed at the time of execution of this Lease.

13.2 **Remedies**. If Lessee fails to perform any of its affirmative duties or obligations, within 10 days after written notice (or in case of an emergency, without notice), Lessor may, at its option, perform such duty or obligation on Lessee's behalf, including but not limited to the obtaining of reasonably required bonds, insurance policies, or governmental licenses, permits or approvals. Lessee shall pay to Lessor an amount equal to 115% of the costs and expenses incurred by Lessor in such performance upon receipt of an invoice therefor. In the event of a Breach, Lessor may, with or without further notice or demand, and without limiting Lessor in the exercise of any right or remedy which Lessor may have by reason of such Breach:

(a) Terminate Lessee's right to possession of the Premises by any lawful means, in which case this Lease shall terminate and Lessee shall immediately surrender possession to Lessor. In such event Lessor shall be entitled to recover from Lessee: (i) the unpaid Rent which had been earned at the time of termination; (ii) the worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that the Lessee proves could have been reasonably avoided; (iii) the worth at the time of award of the amount by which the unpaid rent for the balance of the term after the time of award exceeds the amount of such rental loss that the Lessee proves could be reasonably avoided; and (iv) any other amount necessary to compensate Lessor for all the detriment proximately caused by the Lessee's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, including but not limited to the cost of recovering possession of the Premises, expenses of reletting, including necessary renovation and alteration of the Premises, reasonable attorneys' fees, and that portion of any leasing commission paid by Lessor in connection with this Lease applicable to the unexpired term of this Lease. The worth at the time of award of the amount referred to in provision (iii) of the immediately preceding sentence shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of the District within which the Premises are located at the time of award plus one percent. Efforts by Lessor to mitigate damages caused by Lessee's Breach of this Lease shall not waive Lessor's right to recover damages under Paragraph 12. If termination of this Lease is obtained through the provisional remedy of unlawful detainer, Lessor shall have the right to recover in such proceeding any unpaid Rent and damages as are recoverable therein, or Lessor may reserve the right to recover all or any part thereof in a separate suit. If a notice and grace period required under Paragraph 13.1 was not previously given, a notice to pay rent or quit, or to perform or quit given to Lessee under the unlawful detainer statute shall also constitute the notice required by Paragraph 13.1. In such case, the applicable grace period required by Paragraph 13.1 and the unlawful detainer statute shall run concurrently, and the failure of Lessee to cure the Default within the greater of the two such grace periods shall constitute both an unlawful detainer and a Breach of this Lease entitling Lessor to the remedies provided for in this Lease and/or by said statute.

(b) Continue the Lease and Lessee's right to possession and recover the Rent as it becomes due, in which event Lessee may sublet or assign, subject only to reasonable limitations. Acts of maintenance, efforts to relet, and/or the appointment of a receiver to protect the Lessor's interests, shall not constitute a termination of the Lessee's right to possession.

(c) Pursue any other remedy now or hereafter available under the laws or judicial decisions of the state wherein the Premises are located. The expiration or termination of this Lease and/or the termination of Lessee's right to possession shall not relieve Lessee from liability under any indemnity provisions of this Lease as to matters occurring or accruing during the term hereof or by reason of Lessee's occupancy of the Premises.

13.3 **Inducement Recapture**. Any agreement for free or abated rent or other charges, or for the giving or paying by Lessor to or for Lessee of any cash or other bonus, inducement or consideration for Lessee's entering into this Lease, all of which concessions are hereinafter referred to as **"Inducement Provisions"**, shall be deemed conditioned upon Lessee's full and faithful performance of all of the terms, covenants and conditions of this Lease. Upon Breach of this Lease by Lessee, any such Inducement Provision shall automatically be deemed deleted from this Lease and of no further force or effect, and any rent, other charge, bonus, inducement or consideration theretofore abated, given or paid by Lessor under such an Inducement Provision shall be immediately due and payable by Lessee to Lessor, notwithstanding any subsequent cure of said Breach by Lessee. The acceptance by Lessor of rent or the cure of the Breach which initiated the operation of this paragraph shall not be deemed a waiver by Lessor of the provisions of this paragraph unless specifically so stated in writing by Lessor at the time of such acceptance.

13.4 **Late Charges**. Lessee hereby acknowledges that late payment by Lessee of Rent will cause Lessor to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges, and late charges which may be imposed upon Lessor by any Lender. Accordingly, if any Rent shall not be received by Lessor within 5 days after such amount shall be due, then, without any requirement for notice to Lessee, Lessee shall immediately pay to Lessor a one-time late charge equal to 10% of each such overdue amount or $100, whichever is greater. The parties hereby agree that such late charge represents a fair and reasonable estimate of the costs Lessor will incur by reason of such late payment. Acceptance of such late charge by Lessor shall in no event constitute a waiver of Lessee's Default or Breach with respect to such overdue amount, nor prevent the exercise of any of the other rights and remedies granted hereunder. In the event that a late charge is payable hereunder, whether or not collected, for 3 consecutive installments of Base Rent, then notwithstanding any provision of this Lease to the contrary, Base Rent shall, at Lessor's option, become due and payable quarterly in advance.

13.5 **Interest**. Any monetary payment due Lessor hereunder, other than late charges, not received by Lessor, when due as to scheduled payments (such as Base Rent) or within 30 days following the date on which it was due for non-scheduled payment, shall bear interest from the date when due, as to scheduled payments, or the 31st day after it was due as to non-scheduled payments. The interest (**"Interest"**) charged shall be computed at the rate of 10% per annum but shall not exceed the maximum rate allowed by law. Interest is payable in addition to the potential late charge provided for in Paragraph 13.4.

13.6 **Breach by Lessor**.

(a) **Notice of Breach**. Lessor shall not be deemed in breach of this Lease unless Lessor fails within a reasonable time to perform an obligation required to be performed by Lessor. For purposes of this Paragraph, a reasonable time shall in no event be less than 30 days after receipt by Lessor, and any Lender whose name and address shall have been furnished Lessee in writing for such purpose, of written notice specifying wherein such obligation of Lessor has not been performed; provided, however, that if the nature of Lessor's obligation is such that more than 30 days are reasonably required for its performance, then Lessor shall not be in breach if performance is commenced within such 30 day period and thereafter diligently pursued to completion.

(b) **Performance by Lessee on Behalf of Lessor**. In the event that neither Lessor nor Lender cures said breach within 30 days after receipt of said notice, or if having commenced said cure they do not diligently pursue it to completion, then Lessee may elect to cure said breach at Lessee's expense and offset from Rent the actual and reasonable cost to perform such cure, provided however, that such offset shall not exceed an amount equal to the greater of one month's Base Rent or the Security Deposit, reserving Lessee's right to reimbursement from Lessor for any such expense in excess of such offset. Lessee shall document the cost of said cure and supply said documentation to Lessor.

14. **Condemnation**. If the Premises or any portion thereof are taken under the power of eminent domain or sold under the threat of the exercise of said power (collectively **"Condemnation"**), this Lease shall terminate as to the part taken as of the date the condemning authority takes title or possession, whichever first occurs. If more than 10% of the floor area of the Unit, or more than 25% of the parking spaces is taken by Condemnation, Lessee may, at Lessee's option, to be exercised in writing within 10 days after Lessor shall have given Lessee written notice of such taking (or in the absence of such notice, within 10 days after the condemning authority shall have taken possession) terminate this Lease as of the date the condemning authority takes such possession. If Lessee does not terminate this Lease in accordance with the foregoing, this Lease shall remain in full force and effect as to the portion of the Premises remaining, except that the Base Rent shall be reduced in proportion to the reduction in utility of the Premises caused by such Condemnation. Condemnation awards and/or payments shall be the property of Lessor, whether such award shall be made as compensation for diminution in value of the leasehold, the value of the part taken, or for severance damages; provided, however, that Lessee shall be entitled to any compensation paid by the condemnor for Lessee's relocation expenses, loss of business goodwill and/or Trade Fixtures, without regard to whether or not this Lease is terminated pursuant to the provisions of this Paragraph. All Alterations and Utility Installations made to the Premises by Lessee, for purposes of Condemnation only, shall be considered the property of the Lessee and Lessee shall be entitled to any and all compensation which is payable therefor. In the event that this Lease is not terminated by reason of the Condemnation, Lessor shall repair any damage to the Premises caused by such Condemnation.

15. **Brokerage Fees**.

15.1 **Additional Commission**. In addition to the payments owed pursuant to Paragraph 1.10 above, and unless Lessor and the Brokers otherwise agree in writing, Lessor agrees that: (a) if Lessee exercises any Option, (b) if Lessee or anyone affiliated with Lessee acquires from Lessor any rights to the Premises or other premises owned by Lessor and located within the Project, (c) if Lessee remains in possession of the Premises, with the consent of Lessor, after the expiration of this Lease, or (d) if Base Rent is increased, whether by agreement or operation of an escalation clause herein, then, Lessor shall pay Brokers a fee in accordance with the schedule of the Brokers in effect at the time of the execution of this Lease.

15.2 **Assumption of Obligations**. Any buyer or transferee of Lessor's interest in this Lease shall be deemed to have assumed Lessor's obligation hereunder. Brokers shall be third party beneficiaries of the provisions of Paragraphs 1.10, 15, 22 and 31. If Lessor fails to pay to Brokers any amounts due as and for brokerage fees pertaining to this Lease when due, then such amounts shall accrue Interest. In addition, if Lessor fails to pay any amounts to Lessee's Broker when due, Lessee's Broker may send written notice to Lessor and Lessee of such failure and if Lessor fails to pay such amounts within 10 days after said notice, Lessee shall pay said monies to its Broker and offset such amounts against Rent. In addition, Lessee's Broker shall be deemed to be a third party beneficiary of any commission agreement entered into by and/or between Lessor and Lessor's Broker for the limited purpose of collecting any brokerage fee owed.

15.3 **Representations and Indemnities of Broker Relationships**. Lessee and Lessor each represent and warrant to the other that it has had no dealings with any person, firm, broker or finder (other than the Brokers, if any) in connection with this Lease, and that no one other than said named Brokers is entitled to any commission or finder's fee in connection herewith. Lessee and Lessor do each hereby agree to indemnify, protect, defend and

hold the other harmless from and against liability for compensation or charges which may be claimed by any such unnamed broker, finder or other similar party by reason of any dealings or actions of the indemnifying Party, including any costs, expenses, attorneys' fees reasonably incurred with respect thereto.

16. **Estoppel Certificates**.

(a) Each Party (as **"Responding Party"**) shall within 10 days after written notice from the other Party (the **"Requesting**

Party”) execute, acknowledge and deliver to the Requesting Party a statement in writing in form similar to the then most current **“Estoppel Certificate”** form published by the AIR Commercial Real Estate Association, plus such additional information, confirmation and/or statements as may be reasonably requested by the Requesting Party.

(b) If the Responding Party shall fail to execute or deliver the Estoppel Certificate within such 10 day period, the Requesting Party may execute an Estoppel Certificate stating that: (i) the Lease is in full force and effect without modification except as may be represented by the Requesting Party, (ii) there are no uncured defaults in the Requesting Party’s performance, and (iii) if Lessor is the Requesting Party, not more than one month’s rent has been paid in advance. Prospective purchasers and encumbrancers may rely upon the Requesting Party’s Estoppel Certificate, and the Responding Party shall be estopped from denying the truth of the facts contained in said Certificate.

(c) If Lessor desires to finance, refinance, or sell the Premises, or any part thereof, Lessee and all Guarantors shall within 10 days after written notice from Lessor deliver to any potential lender or purchaser designated by Lessor such financial statements as may be reasonably required by such lender or purchaser, including but not limited to Lessee’s financial statements for the past 3 years. All such financial statements shall be received by Lessor and such lender or purchaser in confidence and shall be used only for the purposes herein set forth.

17. **Definition of Lessor**. The term **“Lessor”** as used herein shall mean the owner or owners at the time in question of the fee title to the Premises, or, if this is a sublease, of the Lessee’s interest in the prior lease. In the event of a transfer of Lessor’s title or interest in the Premises or this Lease, Lessor shall deliver to the transferee or assignee (in cash or by credit) any unused Security Deposit held by Lessor. Upon such transfer or assignment and delivery of the Security Deposit, as aforesaid, the prior Lessor shall be relieved of all liability with respect to the obligations and/or covenants under this Lease thereafter to be performed by the Lessor. Subject to the foregoing, the obligations and/or covenants in this Lease to be performed by the Lessor shall be binding only upon the Lessor as hereinabove defined.

18. **Severability**. The invalidity of any provision of this Lease, as determined by a court of competent jurisdiction, shall in no way affect the validity of any other provision hereof.

19. **Days**. Unless otherwise specifically indicated to the contrary, the word **“days”** as used in this Lease shall mean and refer to calendar days.

20. **Limitation on Liability**. The obligations of Lessor under this Lease shall not constitute personal obligations of Lessor, or its partners, members, directors, officers or shareholders, and Lessee shall look to the Premises, and to no other assets of Lessor, for the satisfaction of any liability of Lessor with respect to this Lease, and shall not seek recourse against Lessor’s partners, members, directors, officers or shareholders, or any of their personal assets for such satisfaction.

21. **Time of Essence**. Time is of the essence with respect to the performance of all obligations to be performed or observed by the Parties under this Lease.

22. **No Prior or Other Agreements; Broker Disclaimer**. This Lease contains all agreements between the Parties with respect to any matter mentioned herein, and no other prior or contemporaneous agreement or understanding shall be effective. Lessor and Lessee each represents and warrants to the Brokers that it has made, and is relying solely upon, its own investigation as to the nature, quality, character and financial responsibility of the other Party to this Lease and as to the use, nature, quality and character of the Premises. Brokers have no responsibility with respect thereto or with respect to any default or breach hereof by either Party.

23. **Notices**.

23.1 **Notice Requirements**. All notices required or permitted by this Lease or applicable law shall be in writing and may be delivered in person (by hand or by courier) or may be sent by regular, certified or registered mail or U.S. Postal Service Express Mail, with postage prepaid, or by facsimile transmission, and shall be deemed sufficiently given if served in a manner specified in this Paragraph 23. The addresses noted adjacent to a Party’s signature on this Lease shall be that Party’s address for delivery or mailing of notices. Either Party may by written notice to the other specify a different address for notice, except that upon Lessee’s taking possession of the Premises, the Premises shall constitute Lessee’s address for notice. A copy of all notices to Lessor shall be concurrently transmitted to such party or parties at such addresses as Lessor may from time to time hereafter designate in writing.

23.2 **Date of Notice**. Any notice sent by registered or certified mail, return receipt requested, shall be deemed given on the date of delivery shown on the receipt card, or if no delivery date is shown, the postmark thereon. If sent by regular mail the notice shall be deemed given 72 hours after the same is addressed as required herein and mailed with postage prepaid. Notices delivered by United States Express Mail or overnight courier that guarantee next day delivery shall be deemed given 24 hours after delivery of the same to the Postal Service or courier. Notices transmitted by facsimile transmission or similar means shall be deemed delivered upon telephone confirmation of receipt (confirmation report from fax machine is sufficient), provided a copy is also delivered via delivery or mail. If notice is received on a Saturday, Sunday or legal holiday, it shall be deemed received on the next business day.

24. **Waivers**.

(a) No waiver by Lessor of the Default or Breach of any term, covenant or condition hereof by Lessee, shall be deemed a waiver of any other term, covenant or condition hereof, or of any subsequent Default or Breach by Lessee of the same or of any other term, covenant or condition hereof. Lessor's consent to, or approval of, any act shall not be deemed to render unnecessary the obtaining of Lessor's consent to, or approval of, any subsequent or similar act by Lessee, or be construed as the basis of an estoppel to enforce the provision or provisions of this Lease requiring such consent.

(b) The acceptance of Rent by Lessor shall not be a waiver of any Default or Breach by Lessee. Any payment by Lessee may be accepted by Lessor on account of moneys or damages due Lessor, notwithstanding any qualifying statements or conditions made by Lessee in connection therewith, which such statements and/or conditions shall be of no force or effect whatsoever unless specifically agreed to in writing by Lessor at or before the time of deposit of such payment.

(c) THE PARTIES AGREE THAT THE TERMS OF THIS LEASE SHALL GOVERN WITH REGARD TO ALL MATTERS RELATED THERETO AND HEREBY WAIVE THE PROVISIONS OF ANY PRESENT OR FUTURE STATUTE TO THE EXTENT THAT SUCH STATUTE IS INCONSISTENT WITH THIS LEASE.

25. **Disclosures Regarding The Nature of a Real Estate Agency Relationship**.

(a) When entering into a discussion with a real estate agent regarding a real estate transaction, a Lessor or Lessee should from the outset understand what type of agency relationship or representation it has with the agent or agents in the transaction. Lessor and Lessee acknowledge being advised by the Brokers in this transaction, as follows:

(i) *Lessor's Agent*. A Lessor's agent under a listing agreement with the Lessor acts as the agent for the Lessor only. A Lessor's agent or subagent has the following affirmative obligations: To the Lessor: A fiduciary duty of utmost care, integrity, honesty, and loyalty in dealings with the Lessor. To the Lessee and the Lessor: (a) Diligent exercise of reasonable skills and care in performance of the agent's duties. (b) A duty of honest and fair dealing and good faith. (c) A duty to disclose all facts known to the agent materially affecting the value or desirability of the property that are not known to, or within the diligent attention and observation of, the Parties. An agent is not obligated to reveal to either Party any confidential information obtained from the other Party which does not involve the affirmative duties set forth above.

(ii) *Lessee's Agent*. An agent can agree to act as agent for the Lessee only. In these situations, the agent is not the Lessor's agent, even if by agreement the agent may receive compensation for services rendered, either in full or in part from the Lessor. An agent acting only for

a Lessee has the following affirmative obligations. To the Lessee: A fiduciary duty of utmost care, integrity, honesty, and loyalty in dealings with the Lessee. To the Lessee and the Lessor: (a) Diligent exercise of reasonable skills and care in performance of the agent's duties. (b) A duty of honest and fair dealing and good faith. (c) A duty to disclose all facts known to the agent materially affecting the value or desirability of the property that are not known to, or within the diligent attention and observation of, the Parties. An agent is not obligated to reveal to either Party any confidential information obtained from the other Party which does not involve the affirmative duties set forth above.

(iii) *Agent Representing Both Lessor and Lessee*. A real estate agent, either acting directly or through one or more associate licenses, can legally be the agent of both the Lessor and the Lessee in a transaction, but only with the knowledge and consent of both the Lessor and the Lessee. In a dual agency situation, the agent has the following affirmative obligations to both the Lessor and the Lessee: (a) A fiduciary duty of utmost care, integrity, honesty and loyalty in the dealings with either Lessor or the Lessee. (b) Other duties to the Lessor and the Lessee as stated above in subparagraphs (i) or (ii). In representing both Lessor and Lessee, the agent may not without the express permission of the respective Party, disclose to the other Party that the Lessor will accept rent in an amount less than that indicated in the listing or that the Lessee is willing to pay a higher rent than that offered. The above duties of the agent in a real estate transaction do not relieve a Lessor or Lessee from the responsibility to protect their own interests. Lessor and Lessee should carefully read all agreements to assure that they adequately express their understanding of the transaction. A real estate agent is a person qualified to advise about real estate. If legal or tax advice is desired, consult a competent professional.

(b) Brokers have no responsibility with respect to any Default or Breach hereof by either Party. The Parties agree that no lawsuit or other legal proceeding involving any breach of duty, error or omission relating to this Lease may be brought against Broker more than one year after the Start Date and that the liability (including court costs and attorneys' fees), of any Broker with respect to any such lawsuit and/or legal proceeding shall not exceed the fee received by such Broker pursuant to this Lease; provided, however, that the foregoing limitation on each Broker's liability shall not be applicable to any gross negligence or willful misconduct of such Broker.

(c) Buyer and Seller agree to identify to Brokers as "Confidential" any communication or information given Brokers that is considered by such Party to be confidential.

26. **No Right To Holdover**. Lessee has no right to retain possession of the Premises or any part thereof beyond the expiration or termination of this Lease. In the event that Lessee holds over, then the Base Rent shall be increased to 150% of the Base Rent applicable immediately preceding the expiration or termination. Nothing contained herein shall be construed as consent by Lessor to any holding over by Lessee.

27. **Cumulative Remedies**. No remedy or election hereunder shall be deemed exclusive but shall, wherever possible, be cumulative with all other remedies at law or in equity.

28. **Covenants and Conditions; Construction of Agreement**. All provisions of this Lease to be observed or performed by Lessee are both covenants and conditions. In construing this Lease, all headings and titles are for the convenience of the Parties only and shall not be considered a part of this Lease. Whenever required by the context, the singular shall include the plural and vice versa. This Lease shall not be construed as if prepared by one of the Parties, but rather according to its fair meaning as a whole, as if both Parties had prepared it.

29. **Binding Effect; Choice of Law**. This Lease shall be binding upon the parties, their personal representatives, successors and assigns and be governed by the laws of the State in which the Premises are located. Any litigation between the Parties hereto concerning this Lease shall be initiated in the county in which the Premises are located.

30. **Subordination; Attornment; Non-Disturbance**.

30.1 **Subordination**. This Lease and any Option granted hereby shall be subject and subordinate to any ground lease, mortgage, deed of trust, or other hypothecation or security device (collectively, **"Security Device"**), now or hereafter placed upon the Premises, to any and all advances made on the security thereof, and to all renewals, modifications, and extensions thereof. Lessee agrees that the holders of any such Security Devices (in this Lease together referred to as **"Lender"**) shall have no liability or obligation to perform any of the obligations of Lessor under this Lease. Any Lender may elect to have this Lease and/or any Option granted hereby superior to the lien of its Security Device by giving written notice thereof to Lessee, whereupon this Lease and such Options shall be deemed prior to such Security Device, notwithstanding the relative dates of the documentation or recordation thereof.

30.2 **Attornment**. In the event that Lessor transfers title to the Premises, or the Premises are acquired by another upon the foreclosure or termination of a Security Devise to which this Lease is subordinated (i) Lessee shall, subject to the non-disturbance provisions of Paragraph 30.3, attorn to such new owner, and upon request, enter into a new lease, containing all of the terms and provisions of this Lease, with such new owner for the remainder of the term hereof, or, at the election of the new owner, this Lease will automatically become a new lease between Lessee and such new owner, and (ii) Lessor shall thereafter be relieved of any further obligations hereunder and such new owner shall assume all of Lessor's obligations, except that such new owner shall not: (a) be liable for any act or omission of any prior lessor or with respect to events occurring prior to acquisition of ownership; (b) be subject to any offsets or defenses which Lessee might have against any prior lessor, (c) be bound by prepayment of more than one month's rent, or (d) be liable for the return of any security deposit paid to any prior lessor which was not paid or credited to such new owner.

30.3 **Non-Disturbance**. With respect to Security Devices entered into by Lessor after the execution of this Lease, Lessee's subordination of this Lease shall be subject to receiving a commercially reasonable non-disturbance agreement (a **"Non-Disturbance Agreement"**) from the Lender which Non-Disturbance Agreement provides that Lessee's possession of the Premises, and this Lease, including any options to extend the term hereof, will not be disturbed so long as Lessee is not in Breach hereof and attorns to the record owner of the Premises. Further, within 60 days after the execution of this Lease, Lessor shall, if requested by Lessee, use its commercially reasonable efforts to obtain a Non-Disturbance Agreement from the holder of any pre-existing Security Device which is secured by the Premises. In the event that Lessor is unable to provide the Non-Disturbance Agreement within said 60 days, then Lessee may, at Lessee's option, directly contact Lender and attempt to negotiate for the execution and delivery of a Non-Disturbance Agreement.

30.4 **Self-Executing**. The agreements contained in this Paragraph 30 shall be effective without the execution of any further documents; provided, however, that, upon written request from Lessor or a Lender in connection with a sale, financing or refinancing of the Premises, Lessee and Lessor shall execute such further writings as may be reasonably required to separately document any subordination, attornment and/or Non-Disturbance Agreement provided for herein.

31. **Attorneys' Fees**. If any Party or Broker brings an action or proceeding involving the Premises whether founded in tort, contract or equity, or to declare rights hereunder, the Prevailing Party (as hereafter defined) in any such proceeding, action, or appeal thereon, shall be entitled to reasonable attorneys' fees. Such fees may be awarded in the same suit or recovered in a separate suit, whether or not such action or proceeding is pursued to decision or judgment. The term, **"Prevailing Party"** shall include, without limitation, a Party or Broker who substantially obtains or defeats the relief sought, as the case may be, whether by compromise, settlement, judgment, or the abandonment by the other Party or Broker of its claim or defense. The attorneys' fees award shall not be computed in accordance with any court fee schedule, but shall be such as to fully reimburse all attorneys' fees reasonably incurred. In addition, Lessor shall be entitled to attorneys' fees, costs and expenses incurred in the preparation and service of notices of Default and consultations in connection therewith, whether or not a legal action is subsequently commenced in connection with such Default or resulting Breach ($200 is a reasonable minimum per occurrence for such services and consultation).

32. **Lessor's Access; Showing Premises; Repairs**. Lessor and Lessor's agents shall have the right to enter the Premises at any time, in the case of an emergency, and otherwise at reasonable times after reasonable prior notice for the purpose of showing the same to prospective

purchasers, lenders, or tenants, and making such alterations, repairs, improvements or additions to the Premises as Lessor may deem necessary or desirable and the erecting, using and maintaining of utilities, services, pipes and conduits through the Premises and/or other premises as long as there is no material adverse effect on Lessee's use of the Premises. All such activities shall be without abatement of rent or liability to Lessee.

33. **Auctions**. Lessee shall not conduct, nor permit to be conducted, any auction upon the Premises without Lessor's prior written consent. Lessor shall not be obligated to exercise any standard of reasonableness in determining whether to permit an auction.

34. **Signs**. Lessor may place on the Premises ordinary "For Sale" signs at any time and ordinary "For Lease" signs during the last 6 months of the term hereof. Except for ordinary "For Sublease" signs which may be placed only on the Premises, Lessee shall not place any sign upon the Project without Lessor's prior written consent. All signs must comply with all Applicable Requirements.

35. **Termination; Merger**. Unless specifically stated otherwise in writing by Lessor, the voluntary or other surrender of this Lease by Lessee, the mutual termination or cancellation hereof, or a termination hereof by Lessor for Breach by Lessee, shall automatically terminate any sublease or lesser estate in the Premises; provided, however, that Lessor may elect to continue any one or all existing subtenancies. Lessor's failure within 10 days following any such event to elect to the contrary by written notice to the holder of any such lesser interest, shall constitute Lessor's election to have such event constitute the termination of such interest.

36. **Consents**. Except as otherwise provided herein, wherever in this Lease the consent of a Party is required to an act by or for the other Party, such consent shall not be unreasonably withheld or delayed. Lessor's actual reasonable costs and expenses (including but not limited to architects', attorneys', engineers' and other consultants' fees) incurred in the consideration of, or response to, a request by Lessee for any Lessor consent, including but not limited to consents to an assignment, a subletting or the presence or use of a Hazardous Substance, shall be paid by Lessee upon receipt of an invoice and supporting documentation therefor. Lessor's consent to any act, assignment or subletting shall not constitute an acknowledgment that no Default or Breach by Lessee of this Lease exists, nor shall such consent be deemed a waiver of any then existing Default or Breach, except as may be otherwise specifically stated in writing by Lessor at the time of such consent. The failure to specify herein any particular condition to Lessor's consent shall not preclude the imposition by Lessor at the time of consent of such further or other conditions as are then reasonable with reference to the particular matter for which consent is being given. In the event that either Party disagrees with any determination made by the other hereunder and reasonably requests the reasons for such determination, the determining party shall furnish its reasons in writing and in reasonable detail within 10 business days following such request.

37. **Guarantor**.

37.1 **Execution**. The Guarantors, if any, shall each execute a guaranty in the form most recently published by the AIR Commercial Real Estate Association.

37.2 **Default**. It shall constitute a Default of the Lessee if any Guarantor fails or refuses, upon request to provide: (a) evidence of the execution of the guaranty, including the authority of the party signing on Guarantor's behalf to obligate Guarantor, and in the case of a corporate Guarantor, a certified copy of a resolution of its board of directors authorizing the making of such guaranty, (b) current financial statements, (c) an Estoppel Certificate, or (d) written confirmation that the guaranty is still in effect.

38. **Quiet Possession**. Subject to payment by Lessee of the Rent and performance of all of the covenants, conditions and provisions on Lessee's part to be observed and performed under this Lease, Lessee shall have quiet possession and quiet enjoyment of the Premises during the term hereof.

39. **Options**. If Lessee is granted an option, as defined below, then the following provisions shall apply.

39.1 **Definition**. **"Option"** shall mean: (a) the right to extend or reduce the term of or renew this Lease or to extend or reduce the term of or renew any lease that Lessee has on other property of Lessor; (b) the right of first refusal or first offer to lease either the Premises or other property of Lessor; (c) the right to purchase, the right of first offer to purchase or the right of first refusal to purchase the Premises or other property of Lessor.

39.2 **Options Personal To Original Lessee**. Any Option granted to Lessee in this Lease is personal to the original Lessee, and cannot be assigned or exercised by anyone other than said original Lessee and only while the original Lessee is in full possession of the Premises and, if requested by Lessor, with Lessee certifying that Lessee has no intention of thereafter assigning or subletting.

39.3 **Multiple Options**. In the event that Lessee has any multiple Options to extend or renew this Lease, a later Option cannot be exercised unless the prior Options have been validly exercised.

39.4 **Effect of Default on Options**.

(a) Lessee shall have no right to exercise an Option: (i) during the period commencing with the giving of any notice of Default and continuing until said Default is cured, (ii) during the period of time any Rent is unpaid (without regard to whether notice thereof is given Lessee), (iii) during the time Lessee is in Breach of this Lease, or (iv) in the event that Lessee has been given 3 or more notices of separate Default, whether or not the Defaults are cured, during the 12 month period immediately preceding the exercise of the Option.

(b) The period of time within which an Option may be exercised shall not be extended or enlarged by reason of Lessee's inability to exercise an Option because of the provisions of Paragraph 39.4(a).

(c) An Option shall terminate and be of no further force or effect, notwithstanding Lessee's due and timely exercise of the Option, if, after such exercise and prior to the commencement of the extended term or completion of the purchase, (i) Lessee fails to pay Rent for a period of 30 days after such Rent becomes due (without any necessity of Lessor to give notice thereof),or (ii) if Lessee commits a Breach of this Lease.

40. **Security Measures**. Lessee hereby acknowledges that the Rent payable to Lessor hereunder does not include the cost of guard service or other security measures, and that Lessor shall have no obligation whatsoever to provide same. Lessee assumes all responsibility for the protection of the Premises, Lessee, its agents and invitees and their property from the acts of third parties.

41. **Reservations**. Lessor reserves the right: (i) to grant, without the consent or joinder of Lessee, such easements, rights and dedications that Lessor deems necessary, (ii) to cause the recordation of parcel maps and restrictions, and (iii) to create and/or install new utility raceways, so long as such easements, rights, dedications, maps, restrictions, and utility raceways do not unreasonably interfere with the use of the Premises by Lessee. Lessee agrees to sign any documents reasonably requested by Lessor to effectuate such rights.

42. **Performance Under Protest**. If at any time a dispute shall arise as to any amount or sum of money to be paid by one Party to the other under the provisions hereof, the Party against whom the obligation to pay the money is asserted shall have the right to make payment "under protest" and such payment shall not be regarded as a voluntary payment and there shall survive the right on the part of said Party to institute suit for recovery of such sum. If it shall be adjudged that there was no legal obligation on the part of said Party to pay such sum or any part thereof, said Party shall be entitled to recover such sum or so much thereof as it was not legally required to pay. A Party who does not initiate suit for the recovery of sums paid "under protest" within 6 months shall be deemed to have waived its right to protest such payment.

43. **Authority; Multiple Parties; Execution**.

(a) If either Party hereto is a corporation, trust, limited liability company, partnership, or similar entity, each individual executing this Lease on behalf of such entity represents and warrants that he or she is duly authorized to execute and deliver this Lease on its behalf. Each Party shall, within 30 days after request, deliver to the other Party satisfactory evidence of such authority.

(b) If this Lease is executed by more than one person or entity as "Lessee", each such person or entity shall be jointly and severally liable hereunder. It is agreed that any one of the named Lessees shall be empowered to execute any amendment to this Lease, or other document ancillary thereto and bind all of the named Lessees, and Lessor may rely on the same as if all of the named Lessees had executed such

document.

(c) This Lease may be executed by the Parties in counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

44. **Conflict**. Any conflict between the printed provisions of this Lease and the typewritten or handwritten provisions shall be controlled by the typewritten or handwritten provisions.

45. **Offer**. Preparation of this Lease by either party or their agent and submission of same to the other Party shall not be deemed an offer to lease to the other Party. This Lease is not intended to be binding until executed and delivered by all Parties hereto.

46. **Amendments**. This Lease may be modified only in writing, signed by the Parties in interest at the time of the modification. As long as they do not materially change Lessee's obligations hereunder, Lessee agrees to make such reasonable non-monetary modifications to this Lease as may be reasonably required by a Lender in connection with the obtaining of normal financing or refinancing of the Premises.

47. **Waiver of Jury Trial**. **THE PARTIES HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO TRIAL BY JURY IN ANY ACTION OR PROCEEDING INVOLVING THE PROPERTY OR ARISING OUT OF THIS AGREEMENT.**

48. **Mediation and Arbitration of Disputes**. An Addendum requiring the Mediation and/or the Arbitration of all disputes between the Parties and/or Brokers arising out of this Lease ☐ is ☒ is not attached to this Lease.

49. **Americans with Disabilities Act.** Since compliance with the Americans with Disabilities Act (ADA) is dependent upon Lessee's specific use of the Premises, Lessor makes no warranty or representation as to whether or not the Premises comply with ADA or any similar legislation. In the event that Lessee's use of the Premises requires modifications or additions to the Premises in order to be in ADA compliance, Lessee agrees to make any such necessary modifications and/or additions at Lessee's expense.

LESSOR AND LESSEE HAVE CAREFULLY READ AND REVIEWED THIS LEASE AND EACH TERM AND PROVISION CONTAINED HEREIN, AND BY THE EXECUTION OF THIS LEASE SHOW THEIR INFORMED AND VOLUNTARY CONSENT THERETO. THE PARTIES HEREBY AGREE THAT, AT THE TIME THIS LEASE IS EXECUTED, THE TERMS OF THIS LEASE ARE COMMERCIALLY REASONABLE AND EFFECTUATE THE INTENT AND PURPOSE OF LESSOR AND LESSEE WITH RESPECT TO THE PREMISES.

ATTENTION: NO REPRESENTATION OR RECOMMENDATION IS MADE BY THE AIR COMMERCIAL REAL ESTATE ASSOCIATION OR BY ANY BROKER AS TO THE LEGAL SUFFICIENCY, LEGAL EFFECT, OR TAX CONSEQUENCES OF THIS LEASE OR THE TRANSACTION TO WHICH IT RELATES. THE PARTIES ARE URGED TO:

1. SEEK ADVICE OF COUNSEL AS TO THE LEGAL AND TAX CONSEQUENCES OF THIS LEASE.

2. RETAIN APPROPRIATE CONSULTANTS TO REVIEW AND INVESTIGATE THE CONDITION OF THE PREMISES. SAID INVESTIGATION SHOULD INCLUDE BUT NOT BE LIMITED TO: THE POSSIBLE PRESENCE OF HAZARDOUS SUBSTANCES, THE ZONING OF THE PREMISES, THE STRUCTURAL INTEGRITY, THE CONDITION OF THE ROOF AND OPERATING SYSTEMS, COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT AND THE SUITABILITY OF THE PREMISES FOR LESSEE'S INTENDED USE.

WARNING: IF THE PREMISES ARE LOCATED IN A STATE OTHER THAN CALIFORNIA, CERTAIN PROVISIONS OF THE LEASE MAY NEED TO BE REVISED TO COMPLY WITH THE LAWS OF THE STATE IN WHICH THE PREMISES ARE LOCATED.

The parties hereto have executed this Lease at the place and on the dates specified above their respective signatures.

Executed at: San Marcos, CA	Executed at: Carlsbad, CA
On: 1/19/12	On: 1/16/12
By LESSOR:	**By LESSEE:**
RGS Properties	Exagen Diagnostics, Inc.
By: /s/ Scott Smith	By: /s/ Ron Rocca
Name Printed: Scott Smith	Name Printed: Ron Rocca
Title: Owner	Title: CEO
By: /s/ Greg Smith	By:
Name Printed: Greg Smith	Name Printed:
Title: RGS Properties c/o Harman Asset Management	Title:
Address: P.O. Box 2463 La Jolla, CA 92038-2463	Address: 801 University Blvd., Ste 103 Albuquerque, NM 87106
Telephone: (858) 454-0101	Telephone: ( )
Facsimile: ( )	Facsimile: ( )
Federal ID No.	Federal ID No.
BROKER:	**BROKER:**
Colliers International	Cassidy Turley/BRE
Attn: Peter Merz/Daniel Knoke	Attn: Steven Field
Title:	Title:
Address: 5901 Priestly Drive, Suite 100 Carlsbad, CA 92008	Address: 1000 Aviara Parkway, Suite 100 Carlsbad, CA 92011

Telephone:	(760) 438-8950	Telephone:	(760) 431-4200
Facsimile:	(760) 438-8925	Facsimile:	(760) 454-3869
Email:		Email:	
Federal ID No.		Federal ID No.	20-0434866

NOTICE: These forms are often modified to meet changing requirements of law and industry needs. Always write or call to make sure you are utilizing the most current form: AIR Commercial Real Estate Association, 800 W 6th Street, Suite 800, Los Angeles, CA 90017. Telephone No. (213) 687-8777. Fax No.: (213) 687-8616.

ADDENDUM TO LEASE DATED JANUARY 13, 2012 BY AND BETWEEN RGS PROPERTIES, AS LESSOR, AND EXAGEN DIAGNOSTICS, INC., AS LESSEE, FOR THE PREMISES KNOWN AS 1261 LIBERTY WAY, SUITE C, VISTA, CALIFORNIA 92083.

50– RENT SCHEDULE:

Per Paragraph 50, Base Rent shall be as follows:

February 1-28, 2012	$4,804.86 Prepaid at lease execution
March 1-31, 2012	$2,402.43 (1/2month rent)
April 1, 2012 - January 31, 2013	$4,804.86 Per month
February 1, 2013 - January 31, 2014	$5,397.24 Per month
February 1. 2014 - January 31, 2015	$5,559.18 Per month
February 1, 2015 - January 31, 2016	$5,725.93 Per month
February 1, 2016 - January 31, 2017	$5,897.71 Per month

51– LEASE COMMENCEMENT:

Lease shall commence upon substantial completion of Tenant Improvements listed in Paragraph 52 which is estimated to be February 1, 2012. If Tenant Improvements are not completed by this date, Commencement will be delayed per Paragraph 3.3.

52– TENANT IMPROVEMENTS:

Prior to lease commencement, Lessor at Lessor's sole cost and expense shall complete the following as depicted in Exhibit A.

A. Completely demise space.

B. Thoroughly clean office and lab areas.

C. Remove and replace water damaged floor tiles along wall in lab area.

D. Seal or install weather strip to exit door in lab area and clean surrounding area.

E. Replace stained and/or damaged ceiling tiles to match existing tiles and grid. Replace existing transparent light diffusers with new ceiling tiles.

F. Lessor to investigate and repair water damage to ceiling grid adjacent to last fume hood and make necessary repairs/remediation and replace ceiling tiles.

G. Lab flooring: clean and polish existing VCT flooring. Replace damaged VCT tiles where bolts from previous benches/racking (multiple locations) and where settling has occurred (east end of lab area).

H. Replace broken plate glass window in front area.

I. Install door, remove cabinetry, and convert "New Office". This area will include new carpet and paint.

J. Provide new carpet and paint to enclosed area – to be used as office/conference space for lab personnel.

K. Remove existing fume hood that is not connected to ventilation system. Existing bench to be left intact and surface to be repaired.

53– SIGNAGE:

Tenant shall be allowed to install signage per city codes and project criteria.

54– LEESEE'S SHARE OF COMMON AREA OPERATING EXPENSES:

Lessee's share of Common Area Operating Expenses shall not increase by more than five percent (5%) per year for initial Lease Term.

55– EARLY ACCESS:

Lessee shall be granted occupancy, free of Base Rent and Operating Expenses, upon lease execution for the purpose of set-up and fixturation, so long as Lessee's activities do not interfere with Lessor's works.

56– HVAC:

Prior to Lease execution, Lessor to provide equipment list and maintenance records for Lessee's review. In the event any of the existing HVAC units are in poor condition or if the term of the lease exceeds the remaining useful life of any of the units, then Lessor shall be responsible for the repair and/or replacement at its sole cost.

57– PRE-PAID RENT:

Upon execution of this lease, Lessee shall pay Lessor pre-paid rent of $60,000. Provided Lessee is not in default of the Lease, Lessor shall apply portions of the prepaid rent to the following months:

- Year 2 (months 23 & 24): $10,000 towards Base Rent (approx. 2 months)
- Year 3 (months 33-36): $20,000 towards Base Rent (approx. 4 months)
- Year 4 (months 44-48): $25,000 towards Base Rent (approx. 5 months)
- Year 5 (month 59): $5,000 towards Base Rent (approx. 1 month)

58– EARLY TERMINATION OPTION:

Lessee shall have one option to terminate the Lease at the end of the 36th month. Lessee shall provide written notice to Lessor of election to terminate Lease at least six (6) months prior to the end of the 36th month of the Lease. If written notice is not received at least six (6) months prior to the end of the Lease, the option to terminate the Lease will automatically expire. In consideration of granting this option to terminate, Lessee shall pay Lessor a fee equal to five (5) months Base Rent and pay for all unamoritized leasing commissions and tenant improvement costs.

59– ADDITIONAL FRONT OFFICE:

Lessor shall provide Lessee with an Improvement Allowance equal to fifteen thousand dollars ($15,000.00) to be used towards Premises modifications in the front office area. Lessee shall fund and construct their own tenant improvements to the Premises subject to a final plan mutually agreed upon by Lessee and Lessor (Lessor's approval shall not be unreasonably withheld or delayed) with all work completed by licensed contractors. Upon completion of tenant improvements and Lessee's submittal of contractor billings and lien releases to Lessor, Lessor shall apply an amount not to exceed $15,000 towards Base Rent.

Additionally, and separate from the Improvement Allowance, Lessor shall pay for the cost of new carpet/base and paint to the front office area labeled as "L", "I" & "J" on the enclosed Exhibit A. Lessee shall coordinate carpet and paint installation as part of its tenant improvements and Lessor shall pay selected contractor directly and will cover costs associated with the removal of existing and installation of new paint and carpet. Colors to be of Lessee's choosing and shall be of similar quality of existing materials and finishes. If Lessor's payment for the costs of carpet and paint shall be withheld or delayed, then Lessee shall apply that costs towards Base Rent. If Lessee has not completed this work within twelve (12) months of Lease Commencement, this Improvement Allowance will automatically expire and Lessor will not be responsible to pay for any work completed by Lessee.

60– EXPANSION:

Lessor shall give Lessee first right of opportunity to lease adjacent Suite B.

IN, WITNESS WHEREOF, Lessor and Lessee have executed this Addendum concurrently with the Lease of even date herewith.

"LESSOR"	"LESSEE"
RGS PROPERTIES	EXAGEN DIAGNOSTICS, INC.
By: /s/ Scott Smith /s/ Greg Smith	By: /s/ Ron Rocca Ron Rocca
Its: Owners	Its: CEO
Date: 1/17/12	Date: 1/16/12

OPTION(S) TO EXTEND
STANDARD LEASE ADDENDUM

Dated January 13, 2012

By and Between (Lessor) RGS Properties

By and Between (Lessee) Exagen Diagnostics, Inc.

Address of Premises: 1261 Liberty Way, Suite C
Vista, CA 92083

Paragraph 61

A. OPTION(S) TO EXTEND:

Lessor hereby grants to Lessee the option to extend the term of this Lease for two (2) additional thirty six (36) month period(s) commencing when the prior term expires upon each and all of the following terms and conditions:

(i) In order to exercise an option to extend, Lessee must give written notice of such election to Lessor and Lessor must receive the same at least 3 but not more than 6 months prior to the date that the option period would commence, time being of the essence. If proper notification of the exercise of an option is not given and/or received, such option shall automatically expire. Options (if there are more than one) may only be exercised consecutively.

(ii) The provisions of paragraph 39, including those relating to Lessee's Default set forth in paragraph 39.4 of this Lease, are conditions of this Option.

(iii) Except for the provisions of this Lease granting an option or options to extend the term, all of the terms and conditions of this Lease except where specifically modified by this option shall apply.

(iv) This Option is personal to the original Lessee, and cannot be assigned or exercised by anyone other than said original Lessee and only while the original Lessee is in full possession of the Premises and without the intention of thereafter assigning or subletting.

(v) The monthly rent for each month of the option period shall be calculated as follows, using the method(s) indicated below: (Check Method(s) to be Used and Fill in Appropriately)

☐ **I. Cost of Living Adjustment(s) (COLA)**

a. On (Fill in COLA Dates):

the Base Rent shall be adjusted by the change, if any, from the Base Month specified below, in the Consumer Price Index of the Bureau of Labor Statistics of the U.S. Department of Labor for (select one): ☐ CPI W (Urban Wage Earners and Clerical Workers) or ☐ CPI U (All Urban Consumers), for (Fill in Urban Area):

All Items (1982-1984 = 100), herein referred to as "CPI".

b. The monthly rent payable in accordance with paragraph A.I.a. of this Addendum shall be calculated as follows: the Base Rent set forth in paragraph 1.5 of the attached Lease, shall be multiplied by a fraction the numerator of which shall be the CPI of the calendar month 2 months prior to the month(s) specified in paragraph A.I.a. above during which the adjustment is to take effect, and the denominator of which shall be the CPI of the calendar month which is 2 months prior to (select one): ☐ the first month of the term of this Lease as set forth in paragraph 1.3 ("Base Month") or ☐ (Fill in Other "Base Month"):

The sum so calculated shall constitute the new monthly rent hereunder, but in no event, shall any such new monthly rent be less than the rent payable for the month immediately preceding the rent adjustment.

c. In the event the compilation and/or publication of the CPI shall be transferred to any other governmental department or bureau or agency or shall be discontinued, then the index most nearly the same as the CPI shall be used to make such calculation. In the event that the Parties cannot agree on such alternative index, then the matter shall be submitted for decision to the American Arbitration Association in accordance with the then rules of said Association and the decision of the arbitrators shall be binding upon the parties. The cost of said Arbitration shall be paid equally by the Parties.

☒ **II. Market Rental Value Adjustment(s) (MRV)**

a. On (Fill in MRV Adjustment Date(s)) February 1, 2017, February 1, 2020 the Base Rent shall be adjusted to the "Market Rental Value" of the property as follows:

1) Four months prior to each Market Rental Value Adjustment Date described above, the Parties shall attempt to agree upon what the new MRV will be on the adjustment date. If agreement cannot be reached, within thirty days, then:

(a) Lessor and Lessee shall immediately appoint a mutually acceptable appraiser or broker to establish the new MRV within the next 30 days. Any associated costs will be split equally between the Parties, or

(b) Both Lessor and Lessee shall each immediately make a reasonable determination of the MRV and submit such determination, in writing, to arbitration in accordance with the following provisions:

(i) Within 15 days thereafter, Lessor and Lessee shall each select an ☐ appraiser or ☐ broker (**"Consultant"** - check one) of their choice to act as an arbitrator. The two arbitrators so appointed shall immediately select a third mutually acceptable Consultant to act as a third arbitrator.

(ii) The 3 arbitrators shall within 30 days of the appointment of the third arbitrator reach a decision as to what the actual MRV for the Premises is, and whether Lessor's or Lessee's submitted MRV is the closest thereto. The decision of a majority of the arbitrators shall be binding on the Parties. The submitted MRV which is determined to be the closest to the actual MRV shall thereafter be used by the Parties.

(iii) If either of the Parties fails to appoint an arbitrator within the specified 15 days, the arbitrator timely appointed by one of them shall reach a decision on his or her own, and said decision shall be binding on the Parties.

(iv) The entire cost of such arbitration shall be paid by the party whose submitted MRV is not selected, ie. the one that is NOT the closest to the actual MRV.

2) Notwithstanding the foregoing, the new MRV shall not be less than the rent payable for the month immediately preceding the rent adjustment.

b. Upon the establishment of each New Market Rental Value:

1) the new MRV will become the new "Base Rent" for the purpose of calculating any further Adjustments, and

2) the first month of each Market Rental Value term shall become the new "Base Month" for the purpose of calculating any further Adjustments.

☐ **III. Fixed Rental Adjustment(s) (FRA)**

The Base Rent shall be increased to the following amounts on the dates set forth below:

On (Fill in FRA Adjustment Date(s)):	The New Base Rent shall be:

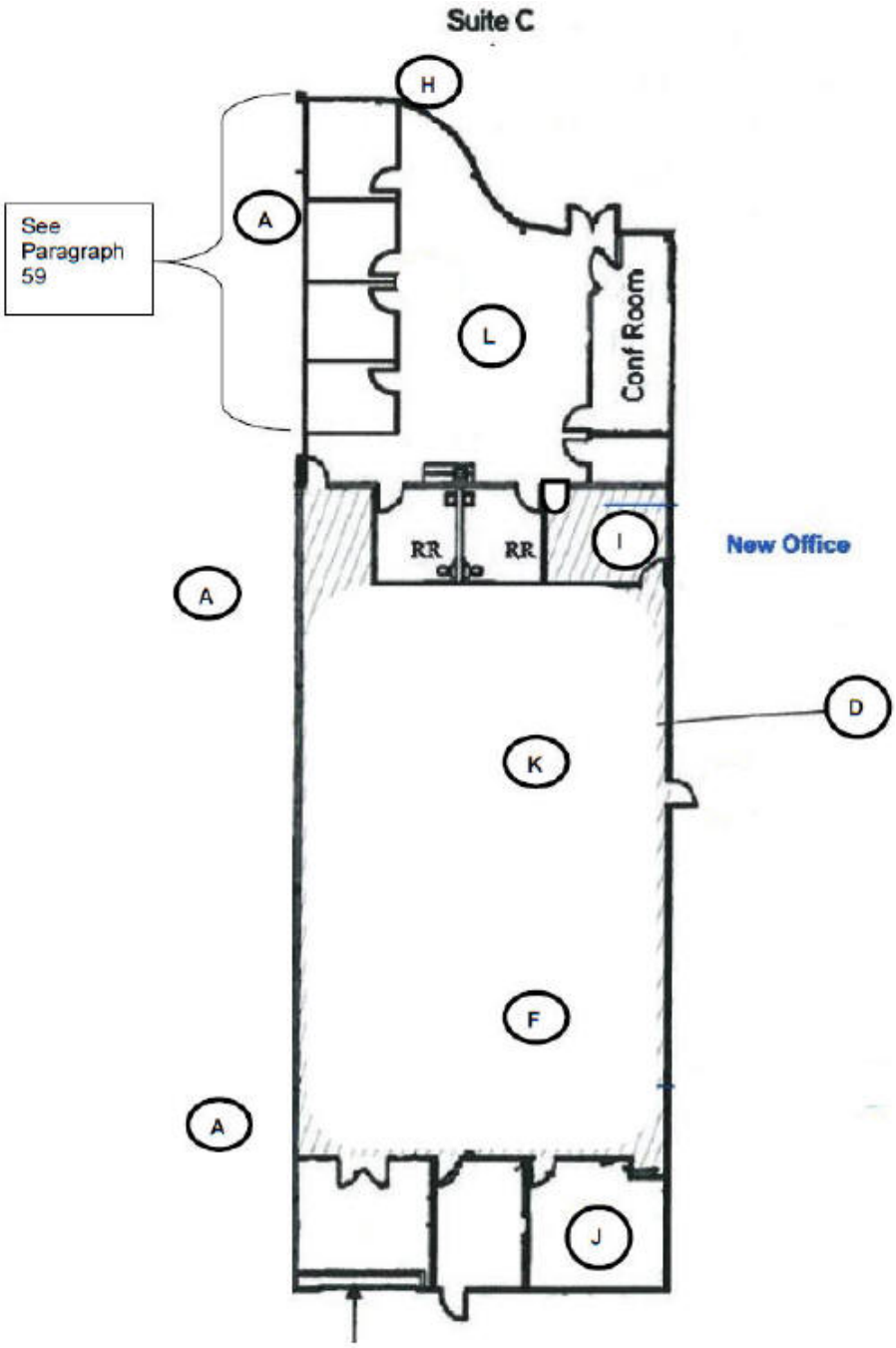
B. NOTICE:

Unless specified otherwise herein, notice of any rental adjustments, other than Fixed Rental Adjustments, shall be made as specified in paragraph 23 of the Lease.

C. BROKER'S FEE:

The Brokers shall be paid a Brokerage Fee for each adjustment specified above in accordance with paragraph 15 of the Lease or if applicable, paragraph 9 of the Sublease.

EXHIBIT A



1261 Liberty Way
Suite C
Vista, CA 92083

Exhibit 10.25

FIRST AMENDMENT TO STANDARD INDUSTRIAL/COMMERCIAL MULTI-TENANT LEASE – NET DATED JANUARY 13, 2012 BY AND BETWEEN RGS PROPERTIES, AS LESSOR AND EXAGEN DIAGNOSTICS, INC., AS LESSEE, FOR THE PREMISES LOCATED AT 1261 LIBERTY WAY, SUITE C, CALIFORNIA.

Lessor and Lessee mutually agree to amend the lease as follows effective December 1, 2013:

Paragraph 1.2 (Premises):

The premises shall be expanded to include suite C and suite B for a combined size of approximately 14,438 SF.

Paragraph 1.2 (b) (Parking):

Parking spaces shall be increased to twenty nine (29) unreserved spaces.

Paragraph 1.6 (Lessee's share of Common Area Operating Expenses):

This share shall be increased to fifty two point one four percent (52.14%)

Paragraph 1.7 (c) (Security Deposit):

Upon execution of this addendum, Lessee shall pay Lessor $5,700 as increased security deposit. The new total combined security deposit will be $13,200.00.

Paragraph 50 (Rent Schedule):

Base Rent shall be as follows:

Dates	Base Rent
December 1, 2013 - January 31, 2014	$8,806.74 per month
February 1, 2014 - January 31, 2015	$8,968.68 per month
February 1, 2015 - January 31, 2016	$9,237.72 per month
February 1, 2016 - January 31, 2017	$9,514.85 per month

Paragraph 56 (HVAC):

This paragraph shall apply to the expansion space in suite B the same as it did to suite C when the original lease was executed. Additionally, and prior to delivery of the Expansion Premises, Lessor shall hire a licensed HVAC contractor to inspect and service all HVAC units, make repairs as necessary, and provide Lessee a copy of report(s), reasonably acceptable to Lessee, ensuring the units are in good operating condition.

Paragraph 61 (Lessor Improvements to Expansion Premises):

Lessor, at Lessor's sole cost shall complete the following improvements.

a) Create an opening/passage way between suites B & C.

b) Paint suite B existing office areas in Lessee selected color.

c) Steam clean carpets in suite B.

d) Remove tree in front of suite C and replace with a small palm tree.

Paragraph 62 (Carpet Replacement):

Lessee, at Lessee' s sole expense, may elect to replace carpet in the office area of suite B. If Lessee elects to replace carpet, Lessor shall reimburse this carpet with an allowance not to exceed $12,000 if Lessee

exercises their option to extend the lease. This allowance shall be applied as a rent credit of $4,000 per month in the first three (3) months of the extension lease term.

Option(s) to Extend:

Lessee's Option to Extend, outlined in Paragraph 61 of the original Lease, shall hereby be expanded to include the Expansion Premises, Suite C.

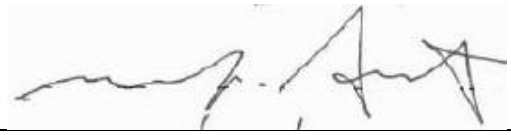
All other terms and conditions of the existing Lease shall remain in full force and effect.

This addendum shall automatically expire if not executed by Lessor and Lessee on or before November 19, 2013.

AGREED AND ACCEPTED:

LESSOR:
RGS Properties

By: 

By: 

LESSEE:
Exagen Diagnostics, Inc.

By: 

Title: CEO

Date: 11/21/13

Date: 11/20/13

Exhibit 10.26

This Lease Agreement may not be modified in any manner without prior approval of the Director of Real Estate, UNM or University Counsel.

LEASE OF REAL PROPERTY

Between

The Regents of the University of New Mexico, Landlord

And

Exagen Diagnostics, Inc, Tenant

Date: May 7, 2013

LEASE

THIS LEASE is entered into by Landlord and Tenant on the Lease Date as defined in Article 1.00 Definitions.

Landlord and Tenant agree:

ARTICLE 1.00 Definitions

In addition to the terms which are defined elsewhere in this Lease, the following defined terms are used in this Lease:

(a) Base Year: Not applicable

(b) Building: 800 Bradbury SE, Albuquerque, New Mexico 87106. The Building is located at the Science & Technology Park @ UNM. Tract 1D1A of the Replat of Tracts 1B and 1D1 University Center, now comprising Tracts 1 D1 and 1 A1 A recorded in the Office of the Bernalillo County Clerk and Records on June 6, 1996 at Volume 96C, Folio 246.

(c) Building Common Area(s): Facilities of the Building in which the Leased Premises are located, that are intended for use by all occupants of the Building, including but not limited to stairs, corridors, lobby, toilet rooms, janitorial rooms, the elevator, mechanical and electrical and telephone rooms. Landlord shall have the right to regulate, modify or restrict the use of Building Common Areas.

(d) Common Area(s): Facilities and areas of the Project, including park infrastructure, which are designated from time to time for the general use, benefit, convenience, health, safety and general welfare of Tenant and the other tenants or occupants of the Project and their employees, customers and invitees, including, without limitation, parking areas, parking structures, sidewalks, walkways, streets, access and perimeter roads, curbs, shrubbery, landscaped areas, planters, outside lighting fixtures, signage, utilities, storm water and drainage facilities, and other similar common areas, facilities, infrastructure and systems, including General Common Properties and Special Common Properties as defined in the Regulations and Restrictions attached as Exhibit “B” of this Lease, and further including without limitation, any services or facilities provided or used for the purposes of promoting the health, safety, welfare and convenience of Tenant, and the other tenants or occupants of the Park including without limitation, security, police and transit. Landlord, or its assigns, shall have the right to regulate, modify or restrict the use of the Common Areas.

(e) Common Area Charge: The cost associated with the operation and maintenance of the Common Area(s). As a Gross Lease, this cost is paid by Landlord under this Lease, and is

included in the monthly rate specified is Section 4.02 of this Lease.

(f) Gross Lease: For consideration of Lease Monthly Rent paid by Tenant to Landlord, Landlord agrees to pay costs and expenses as set forth in this Lease associated with the operation and maintenance of the Leased Premises and the Building, including Operating Costs as defined in Section 6.02, and also including the Common Area Charge, the Park Common Facilities Charge and the Parking Structure Base Rent.

(g) Landlord: The Regents of the University of New Mexico, a body corporate of the State of New Mexico.

(h) Landlord's Address:

Science & Technology Park @ UNM
Property Management Office
851 University Blvd SE
Suite 202
Albuquerque, NM 87106

with a copy to:

UNM Real Estate Office
MSC06 3595
1 University of New Mexico
2811 Campus Drive NE
Albuquerque, New Mexico 87131-0001

(i) Lease Additional Rent: Not applicable.

(j) Lease Adjusted Monthly Rent: Not applicable.

(k) Lease Commencement Date: May 15, 2013

(1) Lease Date: May 7, 2013

(m) Lease Expiration Date: This Lease is for a one (1) year and seventeen (17) day term, not to exceed May 31, 2014.

(n) Lease Monthly Rent: The monthly rent paid by Tenant to Landlord as set forth in Section 4.02 of this Lease.

(o) Lease Occupancy Date: May 15, 2013.

(p) Lease Parking Spaces: Landlord shall provide, or cause to be provided, at no cost to Tenant, no fewer than 9 parking spaces within the Parking Structure.

(q) Leased Premises: Suite 108 located at 800 Bradbury SE, as depicted on Exhibit "A" to this Lease, together with Tenant's Share of Building Common Areas. The Leased Premises contain a total of 3,154 +/- rentable square feet ("rsf"), which includes a seventeen percent (17%) building "load factor" to account for building Common Areas. The Building contains a total of 54,467 rentable square feet.

(r) Lease Rent: The Lease Monthly Rent and any other amounts due under this Lease.

(s) Lease Term: The Lease Term is for one (1) year and seventeen (17) days, beginning on the Lease Commencement Date and expiring on the Lease Expiration Date, unless extended as provided in Section 3.02 of this Lease.

(t) Lease Year(s):

(u) Operating Costs: As defined in Section 6.02 of this Lease. As a Gross Lease, these costs are paid by Landlord under this Lease, and are included in the monthly rate specified in Section 4.02 of this Lease.

(v) Park Common Facilities: Facilities and areas within the Building or other buildings of the Project designated for use by Tenant, and the other tenants or occupants of the Project and their employees, customers, and invitees, including without limitation conference rooms, auditoriums, meeting rooms and classrooms. Landlord, or its assigns, shall have the right to regulate, modify or restrict the use of Park Common Facilities.

(w) Park Common Facilities Charge: The cost associated with the operation and maintenance of the Park Common Facilities. As a Gross Lease, this cost is paid by Landlord under this Lease, and is included in the monthly rate specified in Section 4.02 of this Lease.

(x) Parking Structure: The parking structure (Phase I) located on Tract 1E1 (attached as Exhibit "C"), containing approximately 407 parking spaces.

(y) Parking Structure Base Rent: The cost associated with the debt service on the Parking Structure. As a Gross Lease, this cost is paid by Landlord under this Lease, and is included in the monthly rate specified in Section 4.02 of this Lease.

(z) Project: Science & Technology Park@ UNM

(aa) Tenant: Exagen Diagnostics, Inc.

(bb) Tenant's Address: 800 Bradbury Dr, SE, Suite 108
Albuquerque, New Mexico 87106.

(cc) Tenant's Adjustment Dates: Not applicable.

(dd) Tenant's Broker(s): Not applicable.

(ee) Tenant Improvements: Landlord shall provide, at Landlord's expense, improvements to the premises limited to, demising suite according to the premises as outlined in Exhibit "A," carpet tiled area in 112-A, and clean existing carpet throughout Suite. Any additional tenant improvements shall be approved by the Landlord and at Tenant's sole cost.

(ff) Tenant's Property: As defined in Section 13.06 of this Lease.

(gg) Tenant's Share:

Building: Tenant's share of the building shall be 5.7%, calculated by dividing the rentable square feet of the space (3,154) by the rentable square feet of the building (54,467).

Parking: There are 407 total parking spaces in the Parking Structure, of which 163 spaces are allocated to the Building. The amount of spaces allocated to the space is calculated by multiplying the total spaces (163) allocated to the building by the Tenant's share of the building (5.7%). Therefore, the space is entitled to the use of 9 parking space(s).

Common Areas: The Tenant's common area share of the entire park is currently calculated by dividing the rentable square feet of the space (3,145) by the total gross square feet of all completed buildings located at the Project (663,729), adjusted annually. Therefore, the Tenant's common area share is 0.5%. Once the gross square feet of the space is calculated, the Landlord may recalculate the Tenant's common area share by dividing the gross square feet of the space by the gross square feet of all completed buildings located at the Project.

If any other provision of this Lease contradicts any definition of this Article, the other provision will prevail.

The following exhibits are attached to this Lease and are made parts of this Lease:

Exhibit A - The Leased Premises

Exhibit B - Regulations and Restrictions

Exhibit C - Parking Structure (Tract 1E1)

Exhibit D - Building Rules and Regulations

Exhibit E - Insurance Certificate (to be provided by Tenant)

Exhibit F - Tenant Improvements

ARTICLE 2.00 Agreement

Landlord leases the Leased Premises to the Tenant, and the Tenant leases the Leased Premises from the Landlord, according to this Lease.

ARTICLE 3.00 Term

3.01 General. The duration of this Lease will be the Lease Term. The Lease Term will commence on the Lease Commencement Date and will expire on the Lease Expiration Date, unless extended by Tenant as provided below in Section 3.02.

3.02 Option to Extend Initial Term. Tenant shall have the right to extend the Initial Term of Lease for two (2) one (1) year options, by giving the Landlord written notification of said intent to extend, at least ninety (90) days prior to the end of the initial term. The rent for the First Option term shall be $16.00 per RSF. The rent for the Second Option term shall be $16.00 per RSF.

Option	Duration	Monthly Rent	Annual Rent
1	June 1, 2014 - May 31, 2015	$ 4,205.34	$50,464.00
2	June 1, 2015 - May 31, 2016	$ 4,205.34	$50,464.00

ARTICLE 4.00 Lease Monthly Rent

4.01 Rent. In partial consideration of this Lease, for each month of the Lease Term, including any extension pursuant to Section 3.02, Tenant shall pay Lease Monthly Rent to Landlord in accordance with the schedule set forth in Section 4.02 as rent for the Leased Premises beginning on the Lease Occupancy Date. Lease Monthly Rent shall be due and payable in advance on the first day of each calendar month of the Lease Term. If the Lease Monthly Rent is due on a day other than the first day of a calendar month or the Lease Term ends on a day other than the last day of a calendar month, the Lease Monthly Rent will be appropriately prorated by Landlord for such month. If the Lease Monthly Rent is due on a day other than the first day of a calendar month, then the prorated Lease Monthly Rent for such month will be paid within ten (10) days after the Lease Occupancy Date. Lease Monthly Rent will be paid to Landlord, without notice or demand, and without deduction or offset, in lawful money of the United States of America at Landlord’s Address or to such other person or at such other place as Landlord may from time to time designate in writing. Tenant may prepay Lease Monthly Rent no more than three (3) months in advance, at its option.

Lease Monthly Rent payments made by Tenant under this Lease are separate and distinct from any sponsored agreement between Tenant and the University, and therefore is not subject to any facility and administrative charges by the University.

4.02 Rent Schedule.

Year	Duration	Monthly Rent	Term Rent
	May 15, 2013 – May 31, 2013	Waived	Waived
1	June 1, 2013 – May 31, 2014	$ 3,942.50	$47,310.00

due on the first day of each month.

4.03 Rent Abatement. Omitted.

4.04 Parking Structure Base Rent. None

4.05 Park Common Facilities Charge. None

4.06 Common Area Charge. None

4.07 Gross Lease. Landlord and Tenant agree that this Lease shall be a Gross Lease, and that for good and valuable consideration given by Landlord to Tenant, including Landlord's obligation to pay Operating Costs, as set forth in Article 6.00, Tenant agrees to pay for the Lease Term, at Tenant's sole cost and expense, the Lease Monthly Rent.

4.08 Late Charge. Tenant acknowledges that late payment by Tenant to Landlord of rent or other sums due hereunder will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which would be extremely difficult and impractical to ascertain. Such costs include, but are not limited to, processing and accounting charges due to any supplier of services to the Leased Premises. Therefore, in the event Tenant should fail to pay any installment of rent or any sum due hereunder after such amount is due, Tenant shall, within 10 days, pay to Landlord, as additional rent, a late charge equal to 10% of each such installment or other sum or $25.00 per month, whichever is greater. Said late charge shall be assessed on the eleventh (11th) day of each month.

4.09 Security Deposit. Waived.

4.10 Holding Over. Tenant's holding over or continued use or occupancy beyond the expiration date of the Initial Lease Term shall be construed as a tenancy from month to month at 150 percent (150%) of the most recent monthly rent and subject to the same conditions set forth in this lease.

4.11 Right to Relocate. Landlord hereby reserves the right, at Landlord's sole option, to move the Tenant within the Park. Landlord shall give Tenant thirty days' written notice of its election to move Tenant to other space within the Park and shall provide Tenant, at no cost to

Tenant, comparable Tenant Improvements and equal or greater gross square feet of floor space. Landlord shall, at no out-of-pocket cost to Tenant, move Tenant's personal property and make arrangements for Tenant's telephone and computer ports in the new Premises. Further, if Landlord elects to move Tenant to other space in the Park, Tenant shall have the right to decline the move by written submission to Landlord of notice of termination of its Lease effective the date Landlord has proposed to effect the relocation within the Park.

ARTICLE 5.00 Possession

5.01 Delivery of Possession. If Landlord, for any reason whatsoever, fails to deliver possession of the Leased Premises to Tenant on the Lease Commencement Date, Tenant may, at its option, terminate this Lease by giving the Landlord written notice prior to Landlord's delivery of possession of the Leased Premises. Landlord shall not be liable to Tenant for any loss or damage resulting from Landlord's failure to deliver possession of the Leased Premises. If permission is given to Tenant to occupy the Leased Premises prior to the Lease Commencement Date, such occupancy shall be subject to all provisions of this Lease, and if the term hereof commences on a date later than the Lease Commencement Date the parties agree to execute and acknowledge a written statement setting forth the actual date of commencement of this Lease. This Lease shall be in full force and effect even though either party may fail or refuse to execute such statement.

5.02 Acceptance. The taking of possession of the Leased Premises by Tenant shall be conclusive evidence as against the Tenant that said Leased Premises were in good and satisfactory condition when possession of same was taken, except for matters which could not be ascertained by inspections. Tenant acknowledges that no hazardous materials are present at the Leased Premises as of the Lease Commencement Date.

ARTICLE 6.00. Operating Costs

6.01 General. Landlord shall pay all Operating Costs associated with the Leased Premises, the Building, the Parking Structure, the Common Areas, and the Park Common Facilities as defined in Section 6.02 below.

6.02 Definition. Operating Costs shall mean all expenses, costs and disbursements incurred or paid by Landlord in connection with the management, maintenance and operation of the Building, including associated parking and landscaped areas, the Parking Structure, the Common Areas, and the Park Common Facilities. These costs include but are not limited to (1) utility charges for electricity, gas, sewer, water and refuse collection or other utilities, including any taxes thereon; (2) janitorial services (five days per week) and supplies; landscape and grounds maintenance and repair; (3) insurance premiums and costs for liability, fire and property damage insurance carried by Landlord; (4) maintenance, repair, cleaning and painting of the Building exterior and interior surfaces, including windows, the electrical, plumbing, sewage, heating, ventilation or air conditioning, utility systems, elevators, and other building service equipment, and the irrigation systems and landscaping; and (5) any additional expenditures, furnished to or associated with the Leased Premises, Building, Parking Structure, Common

Areas, and Park Common Facilities, which may be required from time to time in maintaining the operation an office building and office park.

ARTICLE 7.00 Maintenance and Real Estate Taxes

7.01 Maintenance. Subject to the terms of this Lease covering destruction or damage, Landlord will, at its expense, keep the Leased Premises and the Building in compliance with Codes, Statutes, ordinances and regulations applicable to the Building and Leased Premises throughout the Lease Term, and in as good condition as existed at the start of the Lease Term, including, but not limited to, structural repairs, interior and exterior common areas, HVAC system, security system of the Building at points of entry into the Building and the major tenant areas, and occupied space, except for reasonable wear and tear or damage to the Leased Premises or the Building caused by Tenant. Tenant will repair any damage to any additions, alterations or improvements, including the Tenant Improvements, placed on the Leased Premises, caused by Tenant. Landlord or Tenant, as applicable, will make all required repairs in compliance with applicable laws.

7.02 Real Estate Taxes. Landlord shall be responsible for the payment of all real estate taxes, if applicable, on the land and improvements associated with the Building and the Parking Structure. Tenant shall be responsible for the payment of all real estate and/or personal property taxes, if any, associated with Tenant's Property and its leasehold interest in the Lease. In the event rents paid hereunder become subject to taxation, Tenant shall pay Tenant's Share of such additional expense.

ARTICLE 8.00 Insurance

8.01 Landlord's Insurance. Landlord and Tenant acknowledge that Landlord's insurance under this Lease is provided by the Risk Management Division of the State of New Mexico and that such coverage, including limits to coverage, is defined by New Mexico state law.

Landlord shall procure and maintain in effect during the Lease Term, at its sole cost and expense, comprehensive general liability and property damage insurance with respect to the Building, the operation and maintenance of Landlord's obligations with respect to the Leased Premises, the Parking Structure, the Common Area, and the Park Common Facilities, providing personal injury and broad form fire and extended coverage property damage coverage. The parties agree that such insurance shall be provided by the Risk Management Division of the State of New Mexico.

8.02 Tenant's Insurance. During the term of this Lease and any extension thereof, Tenant shall maintain in force, at its sole cost and expense, a policy or policies of insurance providing "commercial general liability" coverage of not less than $1,000,000 limit per occurrence or such other amounts as reasonably required by Landlord, including coverage for property damage, bodily injury and wrongful death (which limit may be increased by written notice from Landlord to correspond to any increase in the limits specified in the New Mexico Tort Claims Act). All insurance required to be carried by Tenant hereunder shall be issued by responsible insurance companies acceptable to Landlord and qualified to do business in the State.

Each policy shall name Landlord as an additional insured, the issuing companies shall have a rating of not less that "A" in the latest edition of Best's Insurance Guide and shall be at least a Class XII company. Each policy shall contain (a) a cross-liability endorsement, (b) a provision that such policy and the coverage evidenced thereby shall be primary and noncontributing with respect to any policies carried by Landlord and that any coverage carried by Landlord shall be excess insurance, and (c) a waiver by the insurer of any right of subrogation against Landlord, its agents, employees and representatives, which arises or might arise by reason of any act or omission of Landlord, its agents, employees or representatives. Landlord may, at any time and from time to time, inspect and/or copy any insurance policies required to be maintained by Tenant hereunder. No such policy shall be cancelable or subject to reduction of coverage or other modification or cancellation except after thirty (30) days written notice to Landlord by the insurer. Tenant shall furnish Landlord with renewals or "binders" of any such policy at least twenty (20) days prior to the expiration thereof. A certificate evidencing such insurance shall be furnished and attached to this Lease as Exhibit "E".

To the extent permitted under their respective insurance policies, Landlord and Tenant hereby waive all rights of recovery against the other and against the officers, employees, agents and representatives, contractors, and invitees of the other, on account of loss by or damage to the waiving party or its property or the property of others under its control, to the extent that such loss or damage is insured against under any insurance policy which may have been in force at the time of such loss or damage.

ARTICLE 9.00 Use

9.01 General. Tenant shall use the Leased Premises for general office purposes.

9.02 Observance of Law. Tenant shall not use or occupy the Leased Premises or permit anything to be done in or about the Leased Premises in violation of any covenant, condition or restriction, or law, statute, ordinance or governmental rules, regulations or requirements now in force or which may hereafter be enacted or promulgated. Tenant shall, at its sole cost and expense, upon notice from Landlord, immediately discontinue any use of the Leased Premises which is declared by any governmental authority having jurisdiction to be a violation of law or the certificate of occupancy and promptly comply with all laws, statutes, ordinances and governmental rules, regulations or requirements now in force or which may hereafter be in force which shall by reason of the nature of Tenant's use or occupancy of the Leased Premises, impose any duty upon Tenant or Landlord with respect to the nature of Tenants use or occupation. The judgment of any court of competent jurisdiction or the admission by Tenant in any action or proceeding against Tenant, whether Landlord is a party thereto or not, that Tenant has violated any such law, statute, ordinance, or governmental regulation, rule or requirement in the use of the Leased Premises shall be conclusive of the fact as between Landlord and Tenant.

9.03 Insurance. Tenant shall not do or permit to be done anything which will invalidate or increase the cost of any fire, extended coverage or other insurance policy covering the Leased Premises, Building, Parking Structure or Project and/or property located therein, and

shall comply with all rules, orders, regulations, requirements and recommendations of Landlord's insurance carrier(s) or any board of fire insurance underwriters or other similar body now or hereafter constituted, relating to or affecting the condition, use or occupancy of the Leased Premises, excluding structural changes not related to or affected by Tenant's improvements or acts. Tenant shall promptly upon demand reimburse Landlord for any additional premium charged for violation of this Section.

9.04 Nuisance and Waste. Tenant shall not do or permit anything to be done in or about the Leased Premises or the Building which will in any way obstruct or interfere with the rights of other tenants or occupants of the Building, or injure them, or use or allow the Leased Premises to be used for any unlawful purpose, nor shall Tenant cause, maintain or permit any nuisance in, or about the Leased Premises. Tenant shall not do anything on the Leased Premises which will cause damage to the Leased Premises or threaten or impair the structural strength of the Leased Premises or the Building. Tenant shall not commit or suffer to be committed any waste in or upon the Leased Premises.

9.05 Load and Equipment Limits. Tenant shall not place a load upon any floor of the Leased Premises which exceeds the load per square foot which such floor was designed to carry as determined by Landlord or Landlord's structural engineer. The cost, of any such determination made by Landlord's structural engineer in connection with Tenant's violation of this Section shall be paid by Tenant upon Landlord's demand. Tenant shall not install business machines or mechanical equipment which will in any manner cause noise objectionable to other tenants of the Building or injure, vibrate or shake the Leased Premises.

9.06 Toxic Materials. Unless Tenant obtains prior written consent of Landlord, Tenant shall not create, generate, use, bring, allow, emit, dispose, or permit on the Leased Premises any toxic or hazardous gaseous, liquid or solid material or waste ("Toxic Material"), including without limitation, material or substance (a) having characteristics of ignitability corrosivity, reactivity, or extraction procedure toxicity, or (b) which is listed on any of the Environmental Protection Agency's lists of hazardous wastes or as identified in the Hazardous Waste Management Regulations promulgated by the Environmental Improvement Board of the New Mexico Health and Environment Department as required under the New Mexico Hazardous Waste Act Section 74-4-1 et seq, NMSA 1978, or (c) which has been determined by New Mexico, federal or local governmental or public authority or agency to be capable of posing a risk of injury to health, safety or property.

Landlord hereby acknowledges that Tenant hereunder does not intend to use Toxic Materials on the Leased Premises and therefore does not need to consent to such use of Toxic Materials in Tenants use of the Leased Premises as in a research and development laboratory. If applicable tenant will provide to Landlord a list of such Toxic Materials and their quantities. Landlord's consent to the use of Toxic Materials by Tenant is limited to use of the Leased Premises as a research and development laboratory, and such consent shall not be construed as a waiver of the requirements to obtain the prior written consent of Landlord hereunder for any other use of the Leased Premises. Nothing contained herein shall relieve Tenant of the obligations contained in this Article nor from compliance with all applicable environmental laws.

Tenant shall indemnify and hold Landlord harmless from any claims, liabilities, costs or expenses incurred or suffered by Landlord arising from Tenant's activities in bringing, allowing, using, permitting, generating, creating, emitting or disposing of Toxic Materials whether or not consent to same has been granted by Landlord. Tenant's indemnification and hold harmless obligations include, without limitation (a) claims, liability, costs or expenses resulting from or based upon administrative, judicial (civil or criminal) or other action, legal or equitable, brought by any private or public person under common law or any federal, state, county or municipal law, ordinance or regulation, (b) claims liabilities, costs or expenses pertaining to the cleanup or containment of Toxic Materials, the identification of any pollutants in the Toxic Materials, the identification of the scope of any environmental contamination, the removal of pollutants from soils, riverbeds or aquifers, the provision of an alternative public drinking water source, (c) all costs and fees incurred in defending such claims, and (d) all costs or losses to Landlord arising from inability or delay in selling or leasing the Leased Premises after the expiration of this Lease, including, without limitation, lost or reduced rents and/or reduction in the market value of the Leased Premises. Tenant shall comply at its sole cost, with all laws pertaining to such Toxic Materials. Tenant's hold harmless and indemnity obligations pursuant to this Section shall survive the expiration or termination of this Lease for a period of three (3) years from the date of expiration or termination.

Tenant shall provide to Landlord a copy of any permit applications and/or permits issued by any governmental agency concerning Tenant's use or generation of Toxic Materials on or about the Leased Premises.

Since Landlord has granted Tenant permission to bring, allow, use, permit, generate, create, emit or dispose of Toxic Materials as set forth in this Article, Tenant shall provide to Landlord on a periodic basis, but not less than annually, a report from a person who is, to Landlord's reasonable satisfaction, appropriately qualified or licensed as an expert in the field of Toxic Materials laws compliance matters, certifying that Tenant is complying with all applicable governmental statutes and regulations concerning Toxic Materials, and that there have been no spills or contamination's by Tenant at the Leased Premises, the Building or the Project that have not been fully corrected and cleaned up. Tenant shall pay the costs and expenses of obtaining any report or study required by this Article, which may be provided by the Safety, Health and Environmental Affairs Department at the University of New Mexico.

In the event of contamination by Toxic Materials at, from, of or around the Leased Premises, the Building or the Project, the cleanup of which is the responsibility of Tenant, Landlord may require within fifteen (15) days after written notification from Landlord that Tenant post a bond or other adequate security to the benefit of Landlord, in an amount equal to Landlord's reasonable estimate of costs for cleaning up the contamination. The posting of the bond does not relieve Tenant from fulfilling its responsibility to clean up the contamination. After the contamination has been cleaned up and certified as set forth in this Article, the bond or other adequate security shall be returned to Tenant.

9.07 Building Common Areas. Tenant is hereby granted, for so long as it is not in

default hereunder, a non-exclusive license to use the Building Common Areas, if any, in common with other occupants of the Building. Tenant shall use the Building Common Areas in conformity with the reasonable rules and regulations adopted by Landlord. The Landlord reserves the right to make changes from time to time in the shape, size, location and extent, of same, provided (i) that any such change shall be after notice to Tenant, except as may be required by law or government agencies, (ii) that any such change shall not impose additional costs on Tenant, and (iii) that such changes shall not unreasonably interfere with, or deprive Tenant of the use and enjoyment of the Leased Premises.

9.08 Park Common Facilities. Tenant is hereby granted, for so long as it is not in default hereunder, a non-exclusive license to use the Park Common Areas, if any, in common with other occupants of the Project, subject to Landlord's right to regulate, amend and modify the Park Common Facilities. Tenant's use of the Park Common Facilities will be on a "first come, first served" basis upon prior notification to Landlord, and will be at no additional cost to Tenant, however, Tenant will be responsible for any ancillary costs associated with its use of the Park Common Facilities, such as food and beverage service, special cleaning, special security and special furniture or facilities set up. Tenant shall use the Park Common Facilities in conformity with the reasonable rules and regulations adopted by Landlord. The Landlord reserves the right to make changes from time to time in the shape, size, location and extent, of same provided, (i) that any such change shall be after notice to Tenant, except as may be required by law or government agencies, (ii) that any such change shall not impose additional costs on Tenant, and (iii) that such changes shall not unreasonably interfere with, or deprive Tenant of the use and enjoyment of the Leased Premises.

9.09 Parking. Tenant is hereby granted the right to use the Lease Parking Spaces for its employees, customers and guests at no additional cost to Tenant throughout the Lease Term, including any extensions pursuant to Section 3.02 of this Lease. The Lease Parking Spaces shall not be designated for exclusive use by Tenant. Tenant shall use the Building Common Areas in conformity with the reasonable rules and regulations adopted by Landlord. The Landlord reserves the right to make changes from time to time in the shape, size, location and extent, of same provided, (i) that any such change shall be after notice to Tenant, except as may be required by law or government agencies, (ii) that any such change shall not impose additional costs on Tenant, and (iii) that such changes shall not unreasonably interfere with, or deprive Tenant of the use and enjoyment of the Leased Premises. Landlord will cooperate, to the extent possible, with Tenant's request for additional parking when notified by Tenant.

ARTICLE 10.00 Assignment and Subletting

10.01 Landlord's Consent. Tenant shall not lease all or any part of the Leased Premises or assign its rights under this Lease without obtaining the prior written consent of Landlord, which consent shall not be unreasonably withheld, however Tenant shall have the right to sublease the Leased Premises or assign this Lease to a subsidiary organization controlled by Tenant without prior written consent of the Landlord. Prior to any assignment or sublease, Tenant, Landlord and assignee (or sublessee) shall execute formal assignment or sublease agreement(s) in a form acceptable to Landlord.

ARTICLE 11.00 Building Rules and Regulations

11.01 Tenant and its employees, agents, licensees and visitors will at all times observe faithfully, and comply strictly with the Building Rules and Regulations attached as Exhibit "D", as the same may be amended from time to time.

ARTICLE 12.00 Park Infrastructure and Common Areas

12.01 Park Infrastructure and Common Areas. Landlord grants Tenant a non-exclusive license for the Lease Term to use the Common Areas, as that term is defined in Section 1.00 (d). Landlord, or its assigns, shall have the right to regulate, modify or restrict the use of the Common Areas.

ARTICLE 13.00 Alterations

13.01 Landlord's Consent. Tenant shall not make any additions, alterations or improvements to the Leased Premises without obtaining the prior written consent of the Landlord. Landlord may require Tenant to submit plans and specifications for the requested alteration work. Landlord's consent may be conditioned on Tenant's removing any such additions, alterations or improvements upon the expiration of the Term and restoring the Leased Premises to the same condition as on the date Tenant took possession, except that this provision regarding removal and restoration shall not apply to the Tenant Improvements.

13.02 Conditions to Making Alterations or Additions. All work with respect to any addition, alteration or improvement shall comply with all applicable laws, ordinances and rules of any public authority including but not limited to the Americans With Disabilities Act. Before any alterations are begun, Tenant shall procure, at its own sole cost and expense all necessary permits from all governmental authorities and shall, on demand, deliver photocopies thereof to Landlord. Upon Tenant's request, Landlord, at no cost or expense to Landlord, shall join in the application for such permits whenever such action is necessary.

In making any alterations, Tenant shall not violate the terms or conditions of any insurance policy obtained or required pursuant to the provisions of this Lease affecting or relating to the Leased Premises or any part thereof.

No alterations shall be made which would affect the outside appearance or strength of the Leased Premises, or adversely affect the proper functioning of any utility systems.

No alterations shall be made which would effect title to the Leased Premises or any part thereof, or which would reduce the value of the Leased Premises below the value thereof immediately prior to the making of such alterations; or violate any of the terms, conditions and covenants of any easement, covenant or restriction affecting the Leased Premises.

Any alteration shall be done in a good and workmanlike manner by properly qualified

and licensed personnel approved by Landlord, and such work shall be diligently prosecuted to completion. The work shall be performed in a manner that will not interfere with the quiet enjoyment of the other tenants in the Building in which the Leased Premises is located.

Landlord may require, in Landlord's sole discretion and at Tenant's sole cost and expense, that Tenant provide Landlord with a performance and/or payment bond, and a bond to release mechanic's lien in the event a lien is ever filed, in an amount equal to the total estimated cost of any additions, alterations or improvements to be made in or to the Leased Premises. Nothing contained herein shall relieve Tenant of its obligation to keep the Leased Premises and Building free of all liens.

Promptly after the completion of any alterations, Tenant shall procure, at Tenant's sole cost and expense, all permits of governmental authorities for the completed alterations as may be required by any applicable laws, if any, and, on demand, shall promptly deliver photocopies thereof to the Landlord.

13.03 Payment. Tenant shall pay the costs of any work done on the Leased Premises pursuant to Article 13.00 and shall keep the Leased Premises and Building free and clear of liens of any kind. Tenant hereby indemnifies and agrees to defend against and keep Landlord free and harmless from all liability, loss, damages, costs, attorney's fees and any other expense incurred on account of Tenant's failure to pay for work performed or materials supplied at the request of Tenant, its officers or employees, or agents.

13.04 Notice. Tenant shall give Landlord at least ten (10) business days prior written notice of the expected date of commencement of any work relating to alterations, additions or improvements to the Leased Premises. Landlord retains the right to enter the Leased Premises and post such notices as Landlord deems proper at any reasonable time with prior notice to Tenant.

13.05 Leasehold Improvements. Except for additions, alterations or improvements made during the Lease Term which Landlord requires Tenant to remove pursuant to Section 13.01, all fixtures, equipment, improvements and appurtenances attached to or built into the Leased Premises at the commencement of or during the Lease Term, whether or not by or at the expense of Tenant ("Leasehold Improvements"), shall be and remain a part of the Leased Premises, shall be the property of Landlord, and shall not be removed by Tenant, except upon Landlord's request or, as expressly provided in Section 13.06 of this Article. Tenant accepts the premises in "as is" condition.

13.06 Tenant's Property. All signs, notices displays, movable partitions, business and trade fixtures, machinery and equipment, communications equipment and office equipment located in the Leased Premises and acquired by or for the account of Tenant, without expense to Landlord, which can be removed without damage to the Leased Premises, and all furniture, furnishings and other articles of tangible personal property owned by Tenant and located in the Leased Premises (collectively "Tenant's Property") shall be and shall remain the property of Tenant and may be removed by Tenant at any time during the Lease Term; provided that if any

of Tenant's Property is removed, Tenant shall promptly repair any damage to the Leased Premises resulting from such removal, including without limitation repairing the carpet, ceiling, flooring and patching and painting the walls where required by Landlord to Landlord's reasonable satisfaction, all at Tenant's sole cost and expense.

13.07 Security Agreement. Tenant hereby grants Landlord a security interest in all of the Tenant's Property. Tenant agrees to execute and deliver financing statements, continuation statements and other related documents upon Lender's request. A carbon copy, photographic or other reproduction of this Lease is sufficient as a financing statement. Ten (10) days notice following a default shall constitute commercially reasonable notice regarding any public sale, private sale of other disposition of all or any portion of Tenant's Property.

ARTICLE 14.00 Mechanic's Liens

As provided in Section 13.02 of the Lease, Tenant shall keep the Leased Premises, Building and Project free and clear of liens of any kind.

ARTICLE 15.00 Surrender of Leased Premises

15.01 Clean and Same Condition. Upon the Lease Expiration Date or earlier termination of this Lease, Tenant shall peaceably surrender the Leased Premises to Landlord clean and in the same condition as when received, except for (a) reasonable wear and tear, (b) loss by fire or other casualty, and (c) loss by condemnation. Tenant shall remove Tenant's Property no later than the Lease Expiration Date. If Tenant is required by Landlord to remove any Tenant Improvements under Article 13.01, Tenant shall complete such removal no later than ten (10) days after the Lease Expiration Date. Any damage to the Leased Premises, including any structural damage, resulting from removal of any addition, alteration, or improvement made pursuant to Article 13.01 and/or from Tenant's use or from the removal of Tenant's Property, or from the removal of Tenant Improvements, pursuant to Article 13.00 shall be repaired no later than ten (10) days after the Lease Expiration Date by Tenant at Tenant's sole cost and expense. On the Lease Expiration Date Tenant shall surrender all keys to the Leased Premises.

15.02 Failure to Deliver Possession. If Tenant fails to vacate and deliver possession of the Leased Premises to Landlord on expiration or termination of this Lease as required by Section 15.01, Tenant, subject to the provisions of this Lease, shall, to the extent permitted by law, indemnify and hold Landlord harmless from all claims, liabilities and damages resulting from Tenant's failure to vacate and deliver possession of the Leased Premises, including, without limitation, claims made by a succeeding tenant resulting from Tenant's failure to vacate and deliver possession of the Leased Premises and rental loss which Landlord suffers.

15.03 Holdover. Any occupancy by Tenant after expiration of Lease will be construed as a month to month tenancy. Tenant's Monthly Lease Rent during the holdover period will not exceed 150% of the most recent Monthly Lease Rent.

15.04. Property Abandoned. If Tenant abandons or surrenders the Leased Premises, or is dispossessed by process of law or otherwise, any of Tenant's Property left on the Leased

Premises shall be deemed to be abandoned, and, at Landlord's option, title shall pass to Landlord under this Lease as by a bill of sale, subject to any prior lienholder, consistent with state law. If Landlord elects to remove all or any part of such Tenant's Property, the cost of removal, including repairing any damage to the Leased Premises caused by such removal, including repairing any damage to the Leased Premises caused by such removal, shall be paid by Tenant.

ARTICLE 16.00 Eminent Domain

16.01 Eminent Domain. If the whole of the Building is lawfully taken by condemnation or in any other manner for any public or quasi-public purpose, this Lease will terminate as of the date of such taking, and the Lease Monthly Rent will be prorated to the date of termination. If less than the whole of the Building is so taken, this Lease will be unaffected by such taking, provided that (i) Tenant will have the right to terminate this Lease by written notice to Landlord given within thirty (30) days after the date of such taking if twenty percent (20%) or more of the Leased Premises is taken and the remaining area of the Leased Premises is not reasonably sufficient for Tenant to continue operation of its business, and (ii) Landlord will have the right to terminate this Lease by written notice to Tenant given within ninety (90) days after the date of such taking if the remaining area of the Building is not reasonably sufficient for the Landlord to continue operation of the Building. If either Landlord or Tenant exercises such right to terminate this Lease, the Lease will terminate as of the date of the taking and the Lease Monthly Rent will be prorated to the date of termination. If the Lease continues in force upon such partial taking the Lease Monthly Rent will be proportionately adjusted based on the reduction in rentable square footage of the Leased Premises.

16.02 Condemnation Proceeds. In the event of any taking, partial or whole, all of the proceeds of any award, judgment or settlement payable by the condemning authority will be the exclusive property of Landlord, and Tenant hereby assigns to Landlord all of its right, title and interest in any award, judgment or settlement from the condemning authority. Tenant, however, will have the right, to the extent that Landlord's award is not reduced or prejudiced, to claim from the condemning authority (but not from Landlord) such compensation as may be recoverable by Tenant in its own right for relocation expenses, damage to Tenant's Property, and loss of Tenant's leasehold estate.

ARTICLE 17.00 Damage and Destruction

17.01 Uninsured Risks. If, during the Lease Term, the Leased Premises are totally or partially destroyed from a risk not covered by insurance through no fault of the Landlord, Landlord, at its option, can elect to terminate this Lease by giving notice to Tenant within thirty (30) days of the date of destruction; provided, however, Landlord shall have no right to terminate the Lease if within ten (10) days following receipt of Landlord's notice of its election to terminate, Tenant provides to Landlord reasonable assurance that Tenant shall pay for the cost of restoring the Leased Premises. However, as to any such uninsured destruction which was caused by an act or omission of Tenant, its employees, agents, invitees or permittees, then Tenant shall reimburse Landlord the full cost of the restoration of the Leased Premises.

17.02 Insured Risks. If, during the Lease Term, the Leased Premises are totally or partially destroyed from a risk covered by insurance, Landlord shall forthwith repair the Leased Premises to substantially the same condition they were in immediately prior to the destruction provided (a) such repairs can, in Landlord's opinion, be completed within ninety (90) days under then applicable laws and regulations, (b) proceeds received under such insurance are available to pay ninety percent (90%) or more of the cost of restoration, and (c) Tenant performs its obligations pursuant to Section 17.03 hereof. Within thirty (30) days of any damage affecting the Leased Premises, Landlord will give Tenant notice indicating whether the foregoing requirements (a) and (b) can, in the Landlord's reasonable opinion, be satisfied. Such destruction shall not annul or void this Lease. During the period of any such repairs the Lease Monthly Rent shall be proportionately reduced to the extent Tenant's use of the Leased Premises is impaired, commencing with the date of damage and continuing until completion of the repairs required of Landlord. If such repairs cannot be made in ninety (90) days or if Landlord fails to provide the notice required under this Section 17.02, Tenant may terminate this Lease by written notice to Landlord. Tenant must exercise this termination option, if at all, within thirty (30) days of the date of destruction. If the damage is due to the neglect of Tenant, its employees, agents, invitees or permittees, there shall be no abatement of Lease Monthly Rent. In the event that Landlord does not so elect to make such repairs which cannot be made in ninety (90) days, or such repairs cannot be made under such then existing laws or regulations, this Lease shall terminate. In the event that the Leased Premises are destroyed to the extent of thirty-three percent (33%) or more of the replacement cost thereof or during the last year of the Term, Landlord may elect to terminate this Lease.

17.03 Tenant Repair. If the Leased Premises are to be repaired under this Article 17.00, Landlord shall repair at its cost any injury or damage to the Leased Premises including the Tenant Improvements installed in the Leased Premises pursuant to Exhibit "F". Tenant shall be responsible at its sole cost and expense for the repair, restoration and replacement of any other Leasehold Improvements installed by Tenant during the Lease Term and Tenant's Property. Landlord shall not be liable for any loss of business, inconvenience or annoyance arising from any repair or restoration of any portion of the Leased Premises or Building as a result of any damage from fire or other casualty.

ARTICLE 18.00 Entry by Landlord

18.01 Right of Entry. Upon twenty-four (24) hours advance notice, except in the case of emergencies, Landlord and its authorized representatives shall have the right and Tenant shall permit entry to the Leased Premises at all reasonable times for any of the following purposes:

To determine whether the Leased Premises are in good condition and whether Tenant is complying with its obligations under this Lease;

To do any necessary or appropriate maintenance and to make any restoration to the Leased Premises and other improvements in which the Leased Premises are located that the Landlord has under this Lease the right or obligation to perform;

To serve, post, or keep posted any notices required or allowed under the provisions of this Lease;

To post “for sale” signs at any time during the Term, to post “for rent” or “for lease” signs during the last one hundred eighty (180) days of the Term or any extension thereof or during any period while the Tenant is in default;

To show the Leased Premises to prospective brokers, agents, buyers, tenants, or persons interested in an exchange, at any time during the Term; and

To shore the foundations, footings, and walls of the Leased Premises, and to erect scaffolding and protective barricades around and about the Leased Premises, but not so as to prevent entry to the Leased Premises, and to do any other act or thing necessary for the safety or preservation of the Leased Premises and other improvements in which the Leased Premises are located if any excavation or other construction is undertaken or is about to be undertaken on any adjacent property or nearby street. To the extent authorized, Landlord’s right under this provision may extend to the owners or users of adjacent property on which excavation or construction is to take place, and to the adjacent property owner s or user’s authorized representatives.

18.02 Exculpation. Landlord shall not be liable in any manner for any inconvenience, disturbance, loss of business, nuisance, or other damages arising out of Landlord’s entry on the Leased Premises as provided in this Article 18.00, nor shall any such entry constitute a constructive eviction or in any way affect Tenant’s obligations under this Lease or entitle Tenant to any abatement or reduction of Lease Monthly Rent and, for other than emergency matters, Landlord agrees to use its best efforts to accomplish such entry in a manner reasonably calculated to minimize the disruption to Tenant and its business operations.

18.03 Movement of Landlord’s Equipment. Omitted

ARTICLE 19.00 Quiet Enjoyment

19.01 Landlord covenants and agrees with Tenant that so long as Tenant pays the Lease Monthly Rent and the Lease Rent, and observes and performs all the terms, covenants and conditions of the Lease on Tenant’s part to be observed and performed, Tenant may peaceably and quietly enjoy the Leased Premises, subject to the terms and conditions of the Lease, and this Lease and Tenant’s possession will not be disturbed by anyone claiming by, through or under Landlord.

19.02 Landlord represents and warrants to Tenant that Landlord is the fee simple owner of the Building and the real property on which the Building is located.

19.03 Landlord represents and warrants to Tenant that the Building and Tenant’s proposed use, as described in Section 9.01, comply with all restrictive covenants applicable to

the Building.

ARTICLE 20.00 Default

20.01 Events of Default. The following events are referred to collectively, as "Events of Default," or individually, as an "Event of Default:"

(a) Tenant defaults in the due and punctual payment of Lease Monthly Rent or Lease Rent, and such default continues for five *(5)* days after notice from Landlord;

(b) Tenant vacates or abandons the Leased Premises;

(c) This Lease or the Leased Premises or any part of the Leased Premises are taken upon execution or by other process of law directed against Tenant, or are taken upon or subject to any attachment at the instance of any creditor or claimant against Tenant, and said attachment is not discharged or disposed of within thirty (30) days after its levy;

(d) Tenant files a petition in bankruptcy or insolvency or for reorganization or arrangement under the bankruptcy laws of the United States or under any insolvency act of any state, or admits the material allegations of any such petition by answer or otherwise, or it dissolved or makes an assignment for the benefit of creditors;

(e) Involuntary proceedings under any such bankruptcy law or insolvency act or for the dissolution of Tenant are instituted against Tenant, or a receiver or trustee is appointed for all or substantially all of the property of Tenant, and such proceedings are not dismissed or such receivership or trusteeship vacated within sixty (60) days after such institution or appointment;

(f) Tenant fails to take possession of the Leased Premises within thirty (30) days of the Lease Commencement Date; or

(g) Tenant breaches any of the other agreements, terms, covenants or conditions which this Lease requires Tenant to perform, and such breach continues for a period of thirty (30) days after notice from Landlord to Tenant; or if such breach cannot be cured reasonably within such thirty (30)-day period and Tenant fails to commence to cure such breach within thirty (30) days after notice from Landlord or fails to proceed diligently to cure such breach within a reasonable time period thereafter.

20.02 Remedies. Upon the occurrence of any one or more of the Events of Default, without further notice or demand, and without limiting Landlord from the exercise of any right or remedy which Landlord may have by reason of such default, Landlord may:

(a) Terminate Tenant's right to possession of the Leased Premises. In such event, Tenant agrees to immediately surrender possession of the Leased Premises to Landlord.

(b) Recover from Tenant all damages incurred by Landlord by reason of Tenant's default, including but not limited to, the cost of recovery of possession of the Leased Premises and expense of reletting, including the expenses of renovation and alteration of the Leased Premises, unamortized expenses of Landlord, Tenant Improvements, advertising and broker's commissions.

(c) Maintain Tenant's right to possession, in which case this Lease shall continue in effect, whether or not Tenant shall have abandoned or surrendered, or attempted to abandon or surrender, the Leased Premises.

(d) Accelerate all amounts to be due from Tenant to Landlord pursuant to this Lease.

(e) Exercise Landlord's lien rights and/or take possession of and sell any of the Tenant's Property located in the Leased Premises.

(f) Exercise any "self-help" remedy available to Landlord, including but not limited to the changing of locks, the plugging of locks or the erection of barriers. Tenant specifically consents to all such "self-help" remedies.

(g) Initiate legal proceedings, as deemed appropriate by Landlord.

(h) Pursue any other remedy now or hereafter available to Landlord at law, in equity, pursuant to this Lease or otherwise.

Except when otherwise agreed to in writing by Landlord, Tenant shall remain liable to Landlord following any surrender or attempted surrender of the Leased Premises. Landlord can re-enter the Leased Premises and relet the Leased Premises, without such action constituting a surrender of the Leased Premises or a termination of this Lease. The initiation of legal proceedings, including but not limited to a forcible entry and detainer action, by Landlord against Tenant shall not be deemed to terminate this Lease.

20.03 Re-Entry By Landlord Default Provisions. In addition to other remedies, if this Lease shall terminate for any reason whatsoever, Landlord or Landlord's agents and employees may, without further notice, immediately or at any time thereafter, enter upon and reenter the Leased Premises or any part thereof, and possess or repossess itself thereof either by summary process proceedings, ejectment or by any suitable action or proceeding at law or by agreement, or by force or otherwise, and may dispossess and remove Tenant and all other persons and property from the Leased Premises without being liable to tenant therefor, and may repossess the same, and may remove any persons therefrom, to the end that Landlord may have, hold and enjoy the Leased Premises and the right to receive all rental income therefrom. The words "enter" or "reenter", "possess" or "repossess" as herein used, are not restricted to their technical legal meaning.

20.04. Threatened Breach. In the event of any breach or threatened breach by Tenant of

any of the agreements, terms, covenants or conditions contained in this Lease, Landlord shall be entitled to enjoin such breach or threatened breach and shall have the right to invoke any right and remedy allowed at law or in equity or by statute or otherwise as though reentry, summary proceedings, and other remedies were not provided for in this Lease.

20.05 Cumulative Remedies. Each right and remedy of Landlord provide for in this Lease shall be cumulative and shall be in addition to every other right or remedy provided for in this Lease or now or hereafter existing at law or in equity or by statute or otherwise, and the exercise or beginning of the exercise by Landlord of any one or more of the rights or remedies provided for in this Lease or now or hereafter existing at law or in equity or by statute or otherwise shall not preclude the simultaneous or later exercise by Landlord of any or all other rights or remedies provided for in this Lease or now or hereafter existing at law or in equity or by statute or otherwise. The doctrine of "election of remedies" shall not apply to this Lease.

20.06 No Offset. No offset or claim that Tenant may have now or in the future against Landlord shall relieve Tenant from performing any of its obligations under this Lease. Once a default has occurred under this Lease, Landlord, in its sole discretion, may require that all future payments from Tenant pursuant to this Lease be in the form of certified funds or wire transfer.

20.07. Interest. Upon the occurrence of an Event of Default, all amounts owed by Tenant to Landlord pursuant to this Lease shall accrue interest at the rate of 15% simple interest per annum.

20.08. Waiver of Redemption. Tenant waives any and all rights of redemption, if any, arising in conjunction with this Lease, as a result of Landlord's exercise of any remedy regarding this lease, or otherwise.

ARTICLE 21.00 Indemnification

21.01 Hold Harmless Agreement. As between the parties, each party acknowledges that it will be responsible for claims or damages arising from personal injury or damage to persons or property to the extent they result from negligence of its employees or agents. The liability of the University of New Mexico shall be subject in all cases to the immunities and limitations of the New Mexico Tort Claims Act, Section 41-4-1 et seq., NMSA 1978, as amended.

21.02 Limitations on Indemnification. To the extent, if at all, Section 56-7-1 NMSA 1978 is applicable to any agreement to indemnify contained in this Lease; such agreement to indemnify will not extend to liability, claims, damages, losses or expenses, including attorneys' fees, arising out of(l) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications by any indemnitee or (2) the giving of or failure to give directions or instructions is the primary cause of bodily injury to persons or damages to property.

ARTICLE 22.00 Tenant's Broker

22.01 Tenant's Broker Fees. None.

Landlord and Tenant each represent and warrant to each other that they have had no dealings with any broker or agent, in connection with the negotiation and/or execution of this Lease. Each party hereby indemnifies and holds harmless the other party from any and all damages, claims, costs, and expenses, including but not limited to attorneys; fees, arising out of the breach of such warranty.

ARTICLE 23.00 Miscellaneous

23.01 Costs and Attorneys' Fees. If this Lease is breached by Tenant, Tenant shall be liable to Landlord for all costs and expenses, including but not limited to attorneys' fees, incurred by Landlord as a result of Tenant's default.

23.02 Governing Law. This Lease shall be construed by and governed in accordance with the law of the State of New Mexico.

23.03 Amendment. No change, amendment, modification, or revision of this Lease shall be valid unless it is in writing and signed by the parties to this Lease.

23.04 Waiver. No waiver or failure by Landlord to enforce any breach of any provision by Tenant shall be construed to be a waiver of any subsequent breach by Tenant, regardless of the time, nature or form of the subsequent breach.

23.05 Notice. All notices pursuant to this Lease shall be in writing and shall be deemed received when personally delivered, one business day after sending by way of overnight courier (for next day delivery), or three business days after the deposit in the U.S. Mail, postage prepaid, by certified mail, return receipt requested, addressed as follows:

LANDLORD:

Science & Technology Park @ UNM
Property Management Office
851 University SE, Suite 202
Albuquerque, New Mexico 87106

and

Director of Real Estate
MSC06 3595

1 University of New Mexico
2811 Campus Drive NE
Albuquerque, New Mexico 87131-0001

TENANT:

Exagen Diagnostics, Inc.
800 Bradbury Dr. SE
Suite 108
Albuquerque, New Mexico 87106

23.06 Captions. The headings or captions used in this Lease are for convenience and reference purposes only, and in no way define, limit or describe the scope or intent of this Lease, any part, section, paragraph or subparagraph of the Lease.

23.07 No Recording. This Lease shall not be recorded by Tenant or Landlord. A Memorandum in a form acceptable to Landlord and Tenant may be recorded.

23.08 Signs. Landlord has no obligation to post any sign at Building other than listing for Tenant in the Building's directory. No sign shall be placed by Tenant at the Leased Premises and/or the Building without Landlord's prior written consent.

23.09 Additional Documents. The parties to this Lease agree to execute such other and further documents as are reasonably necessary to carry out the transactions covered by and/or related to this Lease.

23.10 Exhibits and Addendums. All exhibits and addendums to this Lease are incorporated herein by reference.

23.11 Legal Proceedings. In the event either party commences a legal proceeding to enforce any of the terms of this Lease, the prevailing party in such action shall have the right to recover reasonable attorneys' fees and costs from the other party, to be fixed by the court in the same action. "Legal Proceedings" includes appeals from a lower court judgment as well as proceedings in the Federal Bankruptcy Court ("Bankruptcy Court"), whether or not they are adversary proceeding or contested matters. The "Prevailing Party" (i) as used in the context of proceedings in the Bankruptcy Court means the prevailing party in an adversary proceeding or contested matter, or any other actions taken by the non-bankruptcy party which are reasonably necessary to protect its rights under this Lease, and (ii) as used in the context of proceedings in any court other than the Bankruptcy Court means the party that prevails in obtaining a remedy or relief which most nearly reflects the remedy or relief which the party sought; so that, for example, the prevailing party may be a party which is ordered to pay $100.00 where the obligation to pay $80.00 was undisputed and the claiming party alleged that it was entitled to $1,000.00.

LANDLORD: The Regents of the University of New Mexico a body corporate of the State of New Mexico

Approved as to form:

/s/ David W. Harris

By: David W. Harris
Its: EVP for Administration, COO & CFO

/s/ Bruce Cherrin

By: Bruce Cherrin
Its: Chief Procurement Officer

TENANT: Exagen Diagnostics, Inc.

/s/ Wendy Swedick

By: Wendy Swedick
Its: Chief Financial Officer and Chief Operations Officer

EXHIBIT A

LEASED PREMISES

Suite 108 at 800 Bradbury Dr SE

Floor Plan Follows

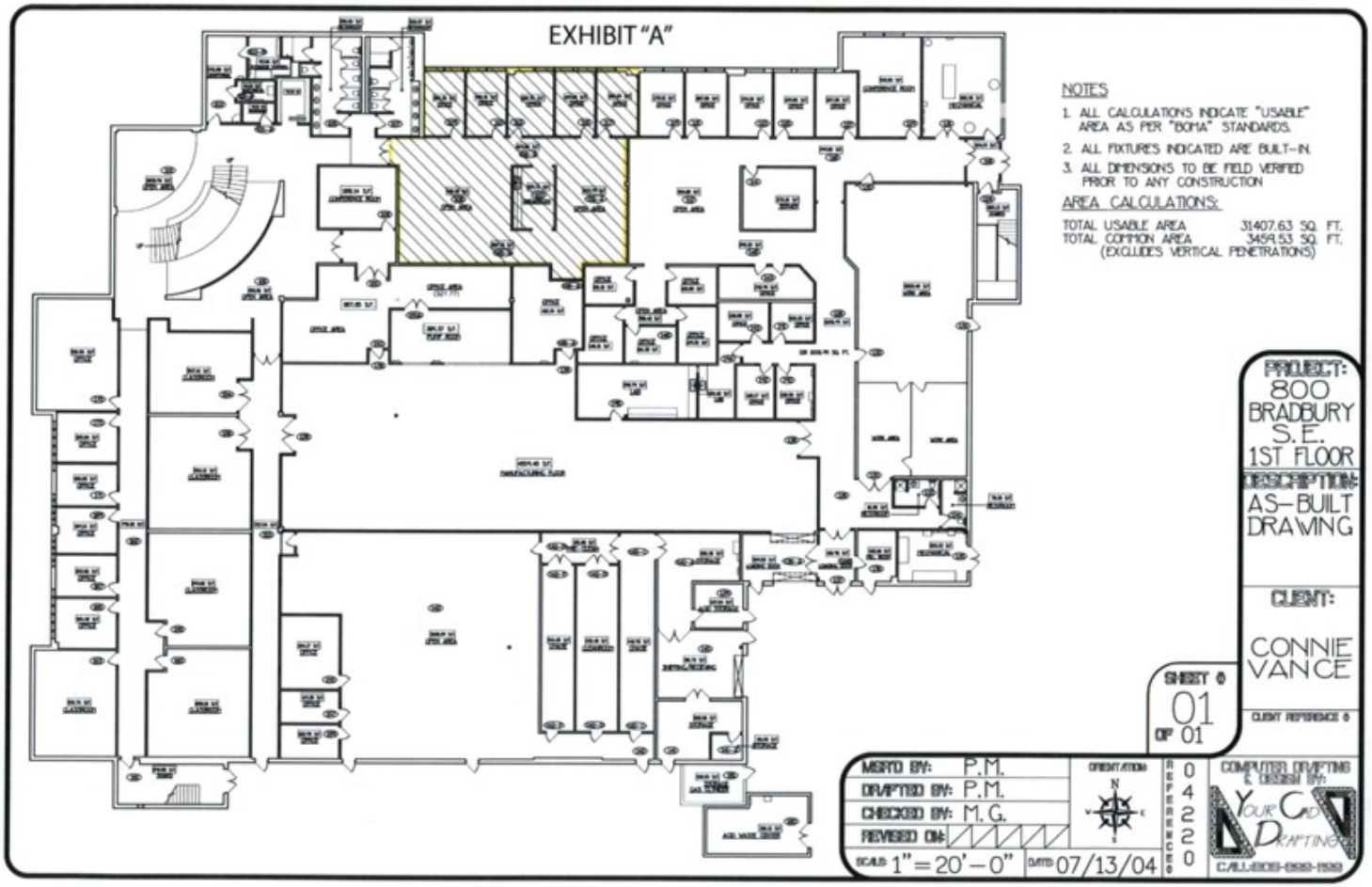


EXHIBIT "A"
NOTES
1. ALL CALCULATIONS INDICATE "USABLE" AREA AS PER "BOMA" STANDARDS.
2. ALL FIXTURES INDICATED ARE BUILT-IN.
3. ALL DIMENSIONS TO BE FIELD VERIFIED PRIOR TO ANY CONSTRUCTION
AREA CALCULATIONS:
TOTAL USABLE AREA 31407.63 SQ. FT.
TOTAL COMMON AREA 3459.53 SQ. FT.
(EXCLUDES VERTICAL PENETRATIONS)
PROJECT:
800 BRADBURY S.E.
1ST FLOOR
DESCRIPTION:
AS-BUILT DRAWING
CLIENT:
CONNIE VANCE
CLIENT REFERENCE #
SHEET #
01
OF 01
MSRD BY: P.M.
DRAFTED BY: P.M.
CHECKED BY: M.G.
REVISED ON:
SCALE 1" = 20'-0"
DATE 07/13/04
ORIENTATION
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REFERENCE
042220
COMPUTER DRAFTING & DESIGN BY:
YOUR CAD DRAFTING
CALL (303) 693-1552

EXHIBIT “B”

REGULATIONS AND RESTRICTIONS

REGULATIONS AND RESTRICTIONS
FOR
UNIVERSITY CENTER RESEARCH PARK

EXHIBIT “B”

SECTION ONE
RESERVED

SECTION TWO
DEFINITIONS

2.1 DEFINITION OF TERMS

All terms defined in the Parcel Ground Lease to which these Regulations and Restrictions are attached as Exhibit D, called "Defined Terms" shall have the same meaning in these Regulations and Restrictions and are hereby incorporated by reference. Additional terms are defined herein.

A. Architectural Review Committee – the body established in accordance with Section 6.1 herein;

B. Building – shall mean any structure intended for use and occupancy by Tenant, Subtenant or Occupant which shall be constructed, erected or placed upon any Building Site, including, but not limited to, garages, outside platforms and docks, storage tanks, carports, canopies, enclosed malls and porches;

C. Building Site – shall mean any contiguous plot of land, the size and dimensions of which shall be established by the legal description in the original conveyance or Parcel Ground Lease from Landlord, to the first Tenant of said plot of land, other than Landlord. The Parcel is one Building Site. A Building Site may also be established by Landlord by an instrument in writing, executed, acknowledged and recorded by the Landlord, which designates a plot of land as a Building Site for purposes of these Regulations and Restrictions. After establishment of a Building Site the boundaries shall remain unchanged, unless revised pursuant to a recorded document executed by Landlord and Tenant thereof; provided, however, that if leasehold interest to two (2) or more adjacent Building Sites, as defined hereinabove, is acquired by the same Tenant, such commonly-owned Building Site may, at the option of said Tenant, be combined and treated as a single Building Site for the purpose of these Regulations and Restrictions;

D. General Common Properties – shall mean and refer to all land, improvements, and other properties heretofore or hereafter owned or in the possession of Landlord or a Tenant or Subtenant and which are designated by Landlord or Tenant as General Common Properties, including, but not limited to, Landscape Buffers, Signage Easements, Storm Drainage Easements, Pedestrian Easements, Parking and Roadway Easements in the Land and all Existing Infrastructure as defined in the Parcel Ground Lease. Landlord or Tenant shall have the right to designate by Subdivision Plat or Declaration of Easement which lands, improvements and other properties are General Common Properties in a document duly recorded in the office of the County Clerk of Bernalillo County, New Mexico;

E. Improvements – shall be defined as in the Parcel Ground Lease;

F. Land – shall be defined as in the Parcel Ground Lease;

G. Landscape Buffer – shall mean and refer to the specific rights, privileges and easements which are established on the Land by Landlord or on individual Building Sites by Landlord or Tenant thereof subsequent to approval pursuant to Section 6.3 hereof by the recording of a Declaration of Easement in the records of the Clerk and Recorder of Bernalillo County, New Mexico. If required by the Architectural Review Committee, with respect to an individual Building Site, the submittal of the Declaration of Easement to the Architectural Review Committee by Tenant shall be mandatory prior to the time of Site Plan approval by the Architectural Review Committee, in accordance with the provisions of Section 6.3 hereof. All such rights, privileges and easements shall be for the benefit of Landlord, all other Tenants and the Land. Such rights, privileges and easements shall be a nonexclusive easement over, across and under a portion of the Building Site or the Land for the purpose of permitting the installation and maintenance of initial landscaping and replacements thereof,

including, but not limited to, the sprinkler system serving the landscaping;

H. Parcel Ground Tenant or Owner – shall mean and refer to the record Tenant of any Parcel ground Lease, whether one or more persons or entities, to any Building Site which is subject to these Regulations and Restrictions; notwithstanding any applicable theory relating to mortgages, deeds of trust or other liens or encumbrances upon any such Building Site, "Parcel Ground Tenant" or "Owner" shall not include or refer to a leasehold mortgagee, beneficiary of a deed of trust, or lienholder unless and until such party has acquired title pursuant to foreclosure or any applicable procedure in lieu of foreclosure, nor shall "Parcel Ground Tenant" or "Owner" include or refer to a lessee or tenant under an occupancy lease;

I. Park Development Standards – shall mean the design standards and regulations of the Architectural Review Committee for the University Center Research Park which shall be adopted from time to time pursuant to Section 6.1 hereof or which have heretofore been adopted by the Landlord;

J. Parking and Roadway Easements – shall mean and refer to the specific rights, privileges and easements which are established on the Land by Landlord or on individual Building Sites by Landlord or the Tenant thereof subsequent to approval pursuant to Section 6.3 hereof by the recording of a Declaration of Easement in the records of the Clerk and Recorder of Bernalillo County, New Mexico. If required by the Architectural Review Committee, with respect to an individual Building Site, submittal of the Declaration of Easement to the Architectural Review Committee by the Tenant shall be mandatory prior to the time of the Site Plan approval by the Architectural Review Committee in accordance with the provisions of Section 6.3 hereof. All such rights, privileges and easements shall be for the benefit of the Landlord, all other Tenants and the Land. Such rights, privileges and easements shall be non-exclusive easements over and across the Building Site or the Land for the purpose of permitting the passage and parking of motor vehicles and the passage and accommodation of pedestrians;

K. Pedestrian Easement – shall mean and refer to the specific rights, privileges and easements which are established on the Land by Landlord or on individual Building Sites by Landlord or the Tenant thereof subsequent to approval pursuant to Section 6.3 hereof by the recording of a Declaration of Easement in the records of the Clerk and Recorder of Bernalillo County, New Mexico. If required by the Architectural Review Committee, with respect to an individual Building Site, a submittal of the Declaration of Easement to the Architectural Review Committee by the Tenant shall be mandatory prior to the time of Site Plan approval by the Architectural Review Committee in accordance with the provisions of Section 6.3 hereof. All such rights, privileges and easements shall be for the benefit of the Landlord, all other Tenants and the Land. Such rights, privileges and easements shall be a nonexclusive easement over and across the designated portions of the Building Site or the Land for the purpose of permitting the passage and accommodations of pedestrians;

L. Plans and Specifications – shall mean and refer to the documents required to be submitted to the Architectural Review Committee, as further described in Section 6.1;

M. Pro Rata Portion of General Common Property Expenses – shall mean and refer to the total amount of all expenses for maintenance, repairs, replacements and services required in connection with the General Common Properties as multiplied by a fraction, the numerator of which shall mean the total number of acres of each Building Site subject to assessment under Section 7 which each Tenant or Subtenant owns, and the denominator of which shall be the total number of acres within the Land subject to assessment under Section 7;

N. Pro Rata Portion of Special Common Property Expenses – shall mean and refer to as a Tenant's or Subtenant's pro rata portion of the expenses for maintenance, repairs, replacements and services required in connection with the Special Common Properties as determined by the Landlord at the time of the establishment of such Special Common Properties;

O. Signage Easement – shall mean and refer to the specific rights, privileges and easements which are

established on the Land by Landlord or on individual Building Sites by Landlord or the Tenant thereof subsequent to approval pursuant to Section 6.3 hereof by the recording of the Declaration of Easement in the records of the Clerk and Recorder of Bernalillo County, New Mexico. If required by the Architectural Review Committee, with respect to an individual Building Site, the submittal of the Declaration of Easement to the Architectural Review Committee by the Tenant shall be mandatory prior to the time of Site Plan approval by the Architectural Review Committee in accordance with the provisions of Section 6.3 hereof. All such rights, privileges and easements shall be for the benefit of Landlord, all other Tenants and the Land. Such rights, privileges and easements shall be a non-exclusive easement over and across a portion of the Building Site or the Land for the purpose of permitting the erection and maintenance of signs which advertise or give information regarding the Land;

P. Site Plan – shall mean and refer to the document required to be submitted to the Architectural Review Committee as further described in Section 6.2;

Q. Special Common Properties – shall mean and refer to all land, improvements and other properties heretofore or hereafter owned or in possession of Landlord or by two (2) or more Tenants but fewer than all Tenants, and which are specifically designated Special Common Properties. Special Common Properties shall be available for the use by such Tenants and their Occupants at such times and under such circumstances as are authorized by Landlord and such Tenants, as set forth in the documents creating the Special Common Properties. A Special Common Property shall be established by the Landlord recording a document covering certain portions or areas of the Land with such areas or facilities being owned and maintained for the benefit of certain Tenants and their Occupants;

R. Storm Drainage Easement – shall mean and refer to the specific rights, privileges and easements which are established on the Land by the Landlord or on individual Building Sites by Landlord or the Tenant thereof subsequent to approval pursuant to Section 6.3 hereof by the recording of a Declaration of Easement in the records of the Clerk and Recorder of Bernalillo County, New Mexico. If required by the Architectural Review Committee, with respect to an individual Building Site, the submittal of the Declaration of Easement to the Architectural Review Committee by the Tenant shall be mandatory prior to the time of Site Plan approval by the Architectural Review Committee in accordance with the provisions of Section 6.3 hereof. All such rights, privileges and easements shall be for the benefit of Landlord, and the Tenants, as more particularly described therein. Such rights, privileges and easements shall be a non-exclusive easement over and across a portion of the Building Site or the Land for the purpose of permitting construction and maintenance of storm drainage facilities and structures and the passage and accommodation of storm water.

SECTION THREE
ADDITIONAL REAL PROPERTIES WHICH MAY BECOME SUBJECT TO THESE REGULATIONS AND RESTRICTIONS

3.1 ADDITIONS TO THE PROPERTY

Additions may be made to the Land in the following ways

A. Landlord shall have the right, but shall be under no obligation except as hereinafter provided, to bring within the framework of these Regulations and Restrictions, and make subject to the provisions hereof, additional real properties that are contiguous to the Land. A property shall be “contiguous” for the purposes of this Section if a boundary of such property adjoins a boundary of the Land; property shall be deemed contiguous notwithstanding any intervening public streets or rights-of-way or utility easements.

B. All additional real properties added to and brought within the framework of these Regulations and Restrictions may include General Common Properties, Special Common Properties, Signage Easements, Pedestrian Easements, Landscaping Easements, Parking and Roadway Easements and

Storm Drainage Easements. All Tenants, Subtenants, Occupants and the Landlord shall have the rights to use and enjoy the General Common Properties and easements.

C. Although the right to include additional real properties within the scope of these Regulations and Restrictions is reserved to Landlord, no covenant is herein made by Landlord that any additional real properties will be so included.

3.2 PURSUANT TO MERGER

Any successor to Landlord, and subject to the limitation of Section 11.10, may administer the Regulations and Restrictions, together with the regulations and restrictions established with respect to any other real property additions, as one scheme. No merger or consolidation, however, shall effect any modification, change or addition to these Regulations and Restrictions except as hereinafter provided.

SECTION FOUR
PERMITTED USES AND PERFORMANCE

4.1 No noxious or offensive trades, services or activities shall be conducted on any Building Site nor shall anything be done thereon which may be or become an annoyance or nuisance to the Tenant, Subtenant or Occupant of other Building Sites within the Land by reason of unsightliness or the excessive emission of fumes, odors, glare, vibration, gases, radiation, dust, liquid waste, smoke or noise.

4.2. Building Sites shall be utilized for office, laboratory research and development, prototype manufacturing and assembly, hotel, conference facility, health club or incidental retail or such other uses as the Landlord shall permit on its sole discretion, consistent with applicable zoning codes and regulations applicable to the Land from time to time.

SECTION FIVE
REGULATIONS OF IMPROVEMENTS

5.1 IMPROVEMENTS GENERALLY. No Buildings or Improvements shall be constructed, erected, placed, altered, contained or permitted on any Building Site until the Site Plans, architectural renderings, sample materials and all other Plans and Specifications, as described hereinafter, therefore have been approved by the Architectural Review Committee as more fully set forth in Section 7 of these Regulations and Restrictions.

5.2 MINIMUM SETBACK LINES. The standards for building setbacks shall be as provided in the Park Development Standards. No Improvement of any kind, and no part thereof, shall be placed on any Building Site closer to a property line than therein provided. All building setbacks shall be measured from the property line.

5.3 BUILDING SITE COVERAGE. Building, open space and landscaping coverage allowed for each Building Site shall be in accordance with the Park Development Standards. Parking structures shall not be calculated as Building area; however, said structures shall be used only for the parking of vehicles of Tenants, Subtenants or Occupants.

5.4 ROOFS

A. Roofs, or portions thereof, will not be permitted so as to be visible from the street(s) or from buildings on other sites unless approved by the Architectural Review Committee.

B. All electrical, mechanical and solar apparatus, equipment, fixtures (other than lighting fixtures), satellite or communications antennae, conduit, ducts, vents, flues and pipes mounted or placed on the roof surface, or extending above the roofline of any Building or structure, or located on the exterior of any Building or structure, or outside a Building or structure, shall be concealed from view from the street(s) and from Buildings on other Building Sites in an architecturally treated manner approved by the Architectural Review Committee, unless the Architectural Review Committee has granted specific written approval of other measures which would minimize the visual effects as viewed from the street(s) and Buildings on other Building Sites.

5.5 EXTERIOR WALLS

A. There shall be no exterior walls of sheet or corrugated iron, steel, aluminum, asbestos or similar materials, unless specific written approval of the Architectural Review Committee is given. In general, exterior walls are to be stucco-finished masonry, concrete or equal material approved by the Architectural Review Committee.

B. Exterior walls shall be painted or suitably treated and maintained in a manner acceptable to the Architectural Review Committee. Exterior walls shall not be repainted or refinished unless and until the Architectural Review Committee has approved in writing the repainting or refinishing.

5.6 BUILDING HEIGHTS. The heights of all Buildings and Improvements shall be in accordance with the Development Standards.

5.7 OFF STREET PARKING. No parking shall be permitted on any street or at any place other than on the paved parking spaces provided for and described herein below, or in parking structures as designated by Landlord. Each Tenant or Subtenant shall be responsible for compliance with the foregoing by its Occupants. Adequate off-street parking shall be provided by each Tenant for the benefit of Tenant, Subtenant and all Occupants. The location, number and size of parking spaces shall be subject to approval by the Architectural Review Committee pursuant to Section 7 hereof. The minimum standards shall be determined in accordance with the Park Development Standards. All off-street parking and access drives and loading areas shall be paved and properly graded to assure proper drainage. The Architectural Review Committee shall have the right to require visual screening between any parking area and any other existing or proposed Building Site or General Common Property. Every Tenant shall be responsible for all costs and expenses incurred in the installation and maintenance of all parking spaces upon such Tenant ’s Building Site.

5.8 LOADING AREAS. All loading areas shall be screened, as may be required by the Architectural Review Committee under the Park Development Standards. Streetside loading will be allowed only if the loading area is at least seventy (70) feet from the street right-of-way or one hundred (100) feet from the street center line, whichever is greater, and screened as required in accordance with the Park Development Standards. Loading and service areas shall be designed as an integral part of the building architecture.

5.9 EXCAVATIONS. No excavations shall be made except in connection with construction of Improvements as approved by the Architectural Review Committee; and upon completion thereof exposed openings shall be backfilled and compacted, and disturbed ground shall be graded and leveled and restored in accordance with the approved Plans and Specifications.

5.10 STORAGE AREAS. All exterior storage, including passenger vehicles owned and operated by the Tenant, Subtenant or Occupants shall be visually screened from all streets and adjacent property by an opaque barrier adequate to screen stored materials, in accordance with the Park Development Standards. No storage shall be located between frontage street and any Building, and there shall be no junk, scrap, rubbish, trash, litter or other accumulate stored which will detract from the appearance of the Building Site.

5.11 SIGNS. No signs shall be permitted anywhere within the Property without prior written approval of the Architectural Review Committee. All signs shall conform with written sign standards for the Land as specified in the Park Development Standards and all applicable laws and governmental regulations.

5.12 REFUSE COLLECTION AREAS. All exterior refuse collection areas shall be totally enclosed and visually screened, in accordance with the Park Development Standards, by an opaque screen at least eight (8) feet in height, from all streets and adjacent property. No refuse collection areas shall be located between a frontage street and any Building.

5.13 LANDSCAPING

A. All Building Sites shall be landscaped only in accordance with the Park Development Standards and a landscape plan submitted to and approved in writing as part of the Plans and Specifications

by the Architectural Review Committee prior to any development of the Building Site. Such landscaping plan shall include and provide:

(1) Drawings and specifications with respect to lawns, shrubs, decorative plantings, trees and plants in the size, type and location thereof;

(2) An underground lawn sprinkling system;

(3) Screening or all storage, loading and unloading areas and additional screening as may be required under these Regulations and Restrictions and the Park Development Standards;

(4) The lighting of Buildings, parking areas and other areas where lighting is to be used;

(5) All other matters reasonably requested for inclusion in such landscaping plan by the Architectural Review Committee.

Further, it shall be the responsibility of the Tenant of a Building Site to landscape and maintain the area between the lot lines of said Tenant's Building Site and the curbs of any roadways adjacent to such Building Site, except as provided in Section 5.14 below. All landscaping shall be undertaken and completed in accordance with approved Plans and Specifications and said Plans and Specifications may not be altered, amended or revised without submitting a revised landscaping plan for prior approval by the Architectural Review Committee.

B. All landscaping required hereunder or otherwise to be provided on any Building Site shall be completed prior to occupancy of any Building to be constructed on the Building Site; provided, however, if weather conditions do not permit completion of the landscaping by such date, then Tenant shall notify the Architectural Review Committee as soon as the Tenant knows of such delay and the Architectural Review Committee may issue an extension upon good cause shown and such landscaping shall be completed as soon thereafter as weather conditions permit. The Tenant shall notify the Architectural Review Committee of the completion of landscaping required by the Plans and Specifications. If any Tenant fails to undertake and complete his landscaping within the time limit previously set forth herein, Landlord may, at its option, after giving the Tenant ten (10) days' written notice forwarded to Tenant (unless within said ten (10) day period the Tenant of the Building Site shall proceed and thereafter pursue with diligence the completion of such landscaping), undertake and complete the landscaping of the Building in accordance with the landscaping plan. If Landlord undertakes and completes such landscaping because of the failure of Tenant to complete the same, the costs of such landscaping shall be assessed against the Tenant, and if said assessment is not paid within thirty (30) days after written notice of such assessment from Landlord, said assessment will constitute a lien on the Building Site and the Improvements and may be enforced as set forth in Section 7.7 hereof. In addition to the foregoing, each Tenant shall deliver to Landlord no later than ten (10) days subsequent to approval of the landscaping plans by the Architectural Review Committee, an irrevocable letter of credit in form satisfactory to Landlord, issued by a commercial bank or savings and loan association approved by Landlord, in the amount of the estimated cost of the landscaping. Said letter may be drawn upon by Landlord to pay the costs of completion of the landscaping, in the event that the landscaping is not completed within the time schedule previously described herein and Landlord elects to undertake and complete the same. Upon completion of the landscaping in accordance with the approved Plans and Specifications, the letter of credit shall be promptly returned by Landlord to Tenant. Notwithstanding the above, a Tenant may, with prior written approval of Landlord, furnish other security satisfactory to Landlord to insure completion of the landscaping plans as approved.

C. It is the intent of Landlord that all Building Sites, including the Improvements and landscaping thereon, be maintained in a uniform, high quality, first-class manner. The Tenant or Subtenant of a Building Site shall be responsible for the landscaping maintenance of its Building Site, and may contract to have such work performed by an independent landscape contractor. If maintenance

performed by such Tenant or Subtenant or its contractor is not in compliance with the landscape maintenance standards established by the Architectural Review Committee and such landscape maintenance is not brought into compliance with such standards within thirty (30) days (or such longer period of time as designated by Landlord or the Architectural Review Committee, in its sole discretion) of the delivery pursuant to Section 11.5 herein of written notice from Landlord or said Committee setting forth the particulars of such non-compliance, Landlord or its designee may, in its sole discretion, enter upon the Building Site and undertake such landscape maintenance. All costs of such maintenance undertaken by Landlord or its designee under such circumstances shall be assessed against the Building Site upon which said landscaping maintenance is performed and the Improvements located thereon and failure to pay such assessment shall constitute a lien against the property enforceable pursuant to Section 7.7.

5.14 MAINTENANCE

A. Each Tenant or Subtenant of any Building Site shall keep his buildings, improvements and appurtenances thereon in a safe, clean, maintained, neat, wholesome condition and shall comply in all respects with all governmental statutes, ordinances, regulations, health and police and fire requirements. Each such Tenant or Subtenant shall remove at his own expense any rubbish or trash of any character which may accumulate on its Building Site. Rubbish, trash, garbage and other waste shall be kept only in sanitary containers. All equipment for the storage or disposal of such trash shall not be disposed of on the Land by burning in open fires.

B. Each Tenant or Subtenant shall pay his Pro Rata Portion of General Common Property Expenses, which shall include the expenses for the maintenance (including landscaping maintenance), repairs, replacements and services required in connection with the General Common Properties (including General Common Properties on additional properties pursuant to Section 3 hereof). Such expenses shall include, but not be limited to, lighting, landscaping, cleaning, liability insurance premiums attributable to such areas, expenses of attendants and security, if any, and all real and personal property taxes, if any. Failure of a Tenant or Subtenant to pay its Pro Rata Portion of General Common Property Expenses shall constitute a lien against the Building Site and the Improvements enforceable as set forth in Section 7.7 hereof. Each Tenant or Subtenant shall have the sole responsibility for the expenses of maintenance (including landscape maintenance), repairs, replacements and services required in connection with the Pedestrian Easements, Parking and Roadway Easements and Landscape Buffer, if any, located upon his Building Site, which expenses shall include, but not be limited to, lighting, landscaping, cleaning, liability insurance premiums attributable to such areas, costs of attendants, if any, and all real and personal property taxes, if any.

5.15 UTILITY CONNECTIONS. All utility connections, including all electrical cable and telephone connections and installations of wires to Buildings shall be made underground from the nearest available power source. No transformer, electric, gas or other meter of any type or other apparatus shall be located on any power pole nor hung on the outside of any Building, but the same shall be placed on or below the surface of the Building Site and where placed on the surface shall be adequately screened and fenced and all such installations shall be subject to prior written approval of the Architectural Review Committee. The Architectural Review Committee shall have the right to require any Tenant to grant on any Building Site easements for utilities and stormwater drainage facilities within the building setback of any Building Site to other Tenants of Building Sites or to such utility companies or public agencies or authorities as it shall deem necessary for the proper service to and maintenance of the Land.

5.16 SITE DRAINAGE

A. Each Tenant shall be required to provide adequate stormwater drainage facilities, including on-site ponding areas (if needed) and metering of storm water runoff resulting from precipitation or storm sewers, or both, in accordance with the requirements of the City of Albuquerque and Bernalillo County and any other applicable governmental agency or authority and with the Park

Development Standards and any master drainage plan for the Land as prepared by Landlord.

B. The change in storm water runoff between the historical (undeveloped) condition and the developed condition shall be measured as the increased flow resulting from changes in coefficient of storm water runoff and the time of concentration. An engineer's report comparing the historical and developed conditions and recommending adequate methods of developed conditions and recommending adequate methods of detention and drainage shall be submitted by each Tenant to the Architectural Review Committee for approval as part of the Plans and Specifications for any Building as provided herein. If required, detention shall be accomplished by providing ponding areas for storage of storm water on rooftops, in parking areas, in landscaped areas, in graded drainage swales, and by such other methods, including Storm Drainage Easements, as may be approved by the Architectural Review Committee.

SECTION SIX
APPROVAL OF PLANS

6.1 ARCHITECTURAL REVIEW COMMITTEE. There is hereby established an Architectural Review Committee whose members shall be appointed by the Landlord. This Committee shall consist of not less than three (3) nor more than five (5) members. Members of the Architectural Review Committee shall serve at the pleasure of the Landlord. The vote of a majority of members shall constitute the action of the Architectural Review Committee. The Landlord or the Architectural Review Committee shall adopt standards and regulations ("Park Development Standards") in accordance with the purposes and intent of these Regulations and Restrictions governing the design and construction of all Improvements on the Land. The Architectural Review Committee shall have the authority to amend the Park Development Standards from time to time, as it deems appropriate; provided, however, that any such amendments must receive the approval of the Landlord and the approval of each Tenant to the extent required by the Parcel Ground Lease for that Tenant. The Park Development Standards shall have the same force and effect and shall be enforceable as these Regulations and Restrictions.

6.2. No improvements shall be constructed, erected, placed, altered, maintained or permitted on any Building Site nor shall any construction or excavation whatsoever be commenced or construction vehicles be placed on a Building Site until plans and specifications with respect thereto in manner and form satisfactory to the Architectural Review committee showing:

(i) The Site Plan, showing, among other things, the location and dimension of all intended Improvements, including (a) Building(s), (b) other structures, (c) motor vehicle parking areas and facilities including the number and size of parking spaces, (d) loading and storage facilities and areas, (e) areas to be landscaped, (f) signs, (g) light fixtures, (h) means of ingress and egress, (i) curb cuts, (j) traffic patterns, (k) drives and driveways, (l) walkways and trails, and (m) screening;

(ii) Drawings and specifications of all exterior surfaces, showing elevations and including the color, quality and type of exterior construction materials;

(iii) Grading and drainage plans, including existing and proposed grade levels, the invert elevation of all sanitary and storm sewer connections and the location of all utility connections;

(iv) A landscaping plan;

(v) The type, style, size and candle power of all outdoor lighting fixtures;

(vi) Drawings and design specifications of all proposed signs, including the colors thereof and the quality and materials to be used in the manner of illumination;

(vii) Proposed use of Building(s) and the Building Site; and

(viii) All such other information as may be reasonably required which will enable the

Architectural Review Committee to determine the location, scale, design, character, style and appearance of the Tenant's intended improvements.

All of the foregoing (hereinafter collectively called "Plans and Specifications") shall conform to the applicable provisions of these Regulations and Restrictions and the Park Development Standards. Such Plans and Specifications shall be submitted in writing over the signature of the Tenant of the Building Site or the Tenant's authorized agent. The Architectural Review Committee shall have the right to charge persons submitting such plans, other than Landlord, a reasonable fee for reviewing each application for approval of the Plans and Specification in any amount established by Landlord from time to time. Such feel shall be payable at the time of submission by a Tenant or its agent of Plans and Specifications to the Architectural Review Committee.

6.3 The Architectural Review Committee may require that the Plans and Specifications be accompanied by a Declaration of Easement with respect to Landscape Buffer, Pedestrian Easements, Signage Easements, Parking and Roadway Easements and Storm Drainage Easements to be located upon the Building Site, in forms approved by the Architectural Review Committee, which forms shall include the approval of any Mortgagee of the Building Site, and shall be submitted with the appropriate recording fee. Upon completion of the Landscape Buffer, Pedestrian Easement, Signage Easement and Storm Drainage Easement, if any, on any individual building Site, the Tenant thereof shall submit to the Architectural Review Committee a revised Declaration of Easement, certifying the exact location of such Landscape Buffer, Pedestrian Easement, Signage Easement, Parking and Roadway Easement and Storm Drainage Easement, if any, due to construction discrepancy, and said revised Declaration of Easement, if any, shall be submitted with the appropriate recording fee. The Declarations of Easement, if any, and the revised Declarations of Easement, if any, shall conform to the overall scheme and plan for the development of the Land and Building Site as set forth herein.

6.4 Landlord and the directors, officers and employees of Landlord, and the Architectural Review Committee members (hereinafter called the "Committee Members") shall not be personally liable to the Tenants, Subtenants or Occupants, for any mistake of judgment or for any other acts or omissions of any nature whatsoever as directors, officers, employees or Committee Members, except for willful misconduct. The foregoing provision shall be in addition to Section 6.8 hereof and not in lieu thereof.

6.5 Until relinquished, Landlord, in its own name and/or on behalf of the Architectural Review Committee, and all Tenants, Subtenants and Occupants, shall have the right to enforce the terms and provisions of these Regulations and Restrictions and Park Development Standards. Landlord shall have the right to transfer its duties or responsibilities pursuant to Section 11.10, below, whereupon such transferee shall have the right and the duty to enforce these Regulations and Restrictions and Park Development Standards and attempt to prevent any violations thereof.

6.6 Approval of the Plans and Specifications shall be based, among other things, on adequacy of Building Site dimensions, conformity and harmony of external design with neighboring structures, effect of locations and use of improvements on neighboring Building Sites, operations and uses; relation of topography, grade and finished ground elevation of the Building Site being improved to that of neighboring Building Sites, proper facing of main elevation with respect to nearby streets; and conformity of the Plans and Specifications to the Park Development Standards, and the purpose and intent of these Regulations and Restrictions. The Architectural Review Committee shall not arbitrarily or unreasonably withhold its approval of such Plans and Specifications.

6.7 If the Architectural Review Committee fails either to approve or to disapprove such Plans and Specifications (including resubmissions of disapproved Plans and Specifications which have been revised) within thirty (30) days after the same have been submitted to it (provided that all required information has been submitted), it shall be conclusively presumed that said Plans and Specifications have been approved, subject, however, to the restrictions contained in Section 5 hereof. The Architectural Review Committee shall notify the Tenant or Subtenant in writing upon receipt of all required Plans and Specifications and the aforesaid thirty (30) day period shall commence on the date of such notification.

6.8 If the Landlord, the Architectural Review Committee or any other Tenant or Subtenant fails to commence an action to abate or enjoin any Improvement which is constructed upon a Building Site in violation of the provisions of this Section 6 within six (6) months after the completion of all Improvements upon the Building Site, the Improvements shall be conclusively presumed to have been approved, subject, however, to the restrictions contained in Section 5 hereof.

6.9 Neither the Architectural Review Committee, nor Landlord or their respective successors or assigns shall be liable in damages to anyone submitting Plans and Specifications to them for approval, or to any Tenant, Subtenant or Occupant of land affected by these Regulations and Restrictions by reason of mistake in judgment, negligence or nonfeasance arising out of or in connection with the approval or disapproval or failure to approve any such Plans and Specifications. Every person who submits Plans and Specifications to the Architectural Review Committee for approval agrees, by submission of such Plans and Specifications, and every Tenant or Subtenant or Occupant of any said Building Sites agrees, by acquiring title hereto or an interest therein, that he will not bring any action or suit against the Architectural Review Committee, or Landlord to recover any such damages. Approval by the Architectural Review Committee or Landlord shall not be deemed to constitute compliance with the requirements of any local building codes, and it shall be the responsibility of the Tenant or Subtenant or agent submitting Plans and Specifications to the Architectural Review Committee to comply therewith. Approval in writing of all Plans and Specifications and amendments thereof must be obtained from the Architectural Review Committee prior to the issuance of any building permits.

6.10 Upon written request of any tenant or Subtenant or agent, the Architectural Review Committee may waive any of the requirements for obtaining approval of Plans and Specifications upon good cause shown. Any waiver issued by the Architectural Review Committee pursuant to this Section must be in writing and no waiver, express or implied, shall be granted unless in writing executed by a properly authorized person.

6.11 Any inconsistency between these Regulations and Restrictions and the Park Development Standards will be governed by the Regulations and Restrictions.

SECTION SEVEN
COVENANTS FOR MAINTENANCE AND ASSESSMENT

7.1 CREATION OF LIEN AND PERSONAL OBLIGATION FOR ASSESSMENTS. Each Tenant, by acceptance of a deed or Parcel Ground Lease to his Building Site, whether or not it shall be so expressed therein, or by acceptance or any other conveyance thereof (except a conveyance in connection with the establishment of a Mortgage), and every Occupant of such Building Site shall be deemed to covenant and agree to pay to Landlord (i) annual assessments or charges; (ii) special assessments for repair, replacement or maintenance of capital improvements; (iii) special assessments in connection with a Tenant’s or Subtenant’s failure to perform the required exterior maintenance of his Building Site and the Improvements located thereon, all as herein described with more particularity; and (iv) special assessments to provide for costs incurred by virtue of unforeseen emergencies, including, but not limited to, unusual snowfalls or heavy rains. All assessments herein provided for shall be assessed by Landlord or its assignee as provided in Section 11.10. The annual assessment shall be levied on an annual basis, and a special assessment shall be levied from time to time as and when determined by Landlord. All assessments described aforesaid together with such interest thereon and costs of collection thereof as are hereinafter provided, shall be a charge on the land and shall be a continuing lien upon the Building Site and Improvements against which each such assessment is made, subject to foreclosure in accordance with applicable law, but any such lien shall be subordinate to any valid Mortgage affecting such Building Site. Each such assessment, together with interest thereon and costs of collection thereof, shall also be the personal obligation of the Tenant, Subtenant and Occupancy of such Building Site at the time the assessment falls due, and in the event there is more than one Tenant, Subtenant or Occupant, such obligations shall be joint and several and shall commence on the date of delivery of a deed or Parcel Ground Lease from Landlord to Tenant.

7.2 PURPOSE AND USE OF ANNUAL ASSESSMENTS OR CHARGES. The annual assessments or charges levied under this Section as provided for in Section 7.1 above shall be used exclusively for the purposes of promoting the health, safety and welfare of all Tenants, Subtenants and Occupants, and in particular for the repair, operation and maintenance of the General Common Properties, including a reasonable administrative fee or charge for administering the General Common Properties, and any services or facilities devoted to such purposes. In addition, the annual assessments or charges may, at the discretion of Landlord, include a reserve for replacement of and repairs to the Improvements located on the General Common Properties.

7.3 SPECIAL ASSESSMENTS FOR CAPITAL IMPROVEMENTS AND EMERGENCIES. In addition to the annual assessments described aforesaid, Landlord may levy in any year one or more special assessments, applicable to that year only, for the purpose of defraying in whole or in part the cost of any reconstruction, unexpected repair or replacement of a capital Improvement upon the General Common Properties and/or Special Common Properties, including the necessary fixtures and personal property related thereto, or for the purpose of defraying in whole or in part the cost of any construction or reconstruction, unexpected repair or replacement, including land rehabilitation and restoration necessitated by an emergency.

7.4 CAPITAL CONTRIBUTIONS FOR IMPROVEMENTS, REPAIRS AND REPLACEMENTS. In addition to the annual or special assessments described aforesaid, Landlord may levy in any year, either as part of the annual assessment or the special assessment, an assessment to be set aside as a capital reserve for major repairs to or replacements of Improvements located on the General Common Properties. Any funds so collected shall be designated by Landlord as capital contributions by the Tenants or Subtenants thereof, as applicable, and shall be segregated and utilized solely for the purposes aforesaid.

7.5 SPECIAL ASSESSMENTS FOR EXTERIOR MAINTENANCE. In the event any Tenant, Subtenant or Occupant shall fail to maintain his Building Site and/or the Improvements situated thereon in a manner satisfactory to the Architectural Review Committee, Landlord shall have the right, through its agents and employees, to enter upon said Building Site and to repair, maintain and restore the same and the exterior of the Buildings and any other Improvements erected thereon in the manner contemplated by the above provisions. The cost of such exterior maintenance shall thereupon be deemed to be a special assessment to which such Building Site and its Tenant, Subtenant and Occupant shall be subject as aforesaid.

7.6 DATE OF COMMENCEMENT AND DETERMINATION OF ANNUAL AND SPECIAL ASSESSMENTS AND ASSESSMENT DEPOSIT. The annual assessments provided for herein shall commence on such date as shall be specified by Landlord or in any Parcel Ground Lease hereto affecting a particular parcel of real property brought within the framework of these Regulations and Restrictions or on the first day of the calendar year following the date of such Parcel Ground Lease if no other date is specified. Assessments shall be on a full calendar year basis. At least thirty (30) days in advance of the beginning of each calendar year, Landlord shall fix the amount of the annual assessment against each Building Site by estimating the charges and expenses to be incurred by Landlord for the purposes set forth in these Regulations and Restrictions. A year-end adjustment may be made by Landlord as is necessary to reflect the actual cost of such expenses. The annual assessments shall be due and payable to Landlord by each Tenant or Subtenant in monthly installments and shall be accompanied by an itemized statement of such costs and the manner in which each share was determined. Each Tenant or Subtenant shall pay the amount shown on the statement no later than the date thirty (30) days after receipt of such statement. In addition, Landlord may require an amount to be deposited with Landlord at the time of the first conveyance or Parcel Ground Lease of any Building Site from Landlord to any purchaser or Parcel Ground Lessee, as applicable, thereof, and which deposit shall not bear interest and may be retained by Landlord as working capital and as security for the payment of future annual and special assessments. The annual and special assessments shall be in such amounts as are fixed by Landlord and shall be without limitation unless otherwise specified in a Parcel Ground Lease affecting a particular parcel of real property brought within the framework of the Regulations and Restrictions.

7.7 EFFECT OF NON-PAYMENT OF ASSESSMENTS AND PERSONAL LIABILITY OF OWNER.

A. If an assessment is not paid on the date when due (being the date specified in Section 7.6 hereof), then such assessment shall be deemed delinquent and shall thereupon be deemed, together with such interest thereon and costs of collection thereof as hereinafter provided, a continuing lien upon the Building Site and all Improvements thereon and such continuing lien shall bind the Building Site and all Improvements thereon in the hands of the then Tenant or Subtenant, his heirs, devisees, personal representatives, successors and assigns. In addition to the lien upon the Building Site and all Improvements thereon, it shall be the personal obligation of each Tenant or Subtenant to pay the assessment affecting his Building Site assessed during its ownership period and such personal obligation shall continue even though the Tenant's or Subtenant's interest in such property shall be transferred.

B. If any assessment is not paid within thirty (30) days after its due date, it shall bear interest from the due date at a rate equal to five percent (5%) above the then Prime Rate, but in no event greater than the amount permitted by applicable law. Landlord may bring legal action against the Building Site and the Improvements thereon and/or the Tenant or Subtenant thereof to collect any unpaid assessment and there shall be added to the amount of such assessment all costs incurred by Landlord in foreclosing or attempting to foreclose the lien or in collecting or attempting to collect the amount owing, including any reasonable attorneys' fees. If the lien is foreclosed, it shall be foreclosed under the same procedure applicable to the foreclosure of mortgages and the redemption period following any judicial sale shall be one (1) month in lieu of nine (9) months.

C. In addition to any other remedy provided herein, the Landlord may consider nonpayment of any assessment as an event of default under any Parcel Ground Lease and may proceed to exercise all remedies under the Parcel Ground Lease.

7.8 SUBORDINATION OF THE LIEN TO MORTGAGES. As provided aforesaid, the lien of the assessments provided for herein shall be subordinate to the lien of any bona fide security device, including the lien of any Mortgage or any sale and leaseback transaction now or hereafter placed upon the Building Site subject to assessment; provided, however, such subordination shall apply only to the assessments which have become due and payable prior to a decree of foreclosure, or other proceeding in lieu of foreclosure. Such sale or transfer shall not release such Building Site from liability for any assessment thereafter becoming due, nor from the lien of any such subsequent assessments.

7.9 PROPERTY NOT SUBJECT TO ASSESSMENT. The following parts of the Land shall be exempt from assessments charges and liens created by these Regulations and Restrictions:

(a) All parts of the Land dedicated to and accepted by Bernalillo County, the City of Albuquerque and any other public or quasi-public authority; and

(b) All General Common Property whether or not located within a Building Site.

7.10 LANDLORD'S MAINTENANCE OBLIGATIONS. Subject to Landlord receiving reimbursement pursuant to the assessment provisions, until Landlord shall have assigned its rights and obligations with respect to the General Common Properties and other maintenance obligations to an assignee, association, successor or transferee, it shall maintain, repair, replace and renew or cause to be maintained, repaired, replaced or renewed the General Common Properties and other maintenance obligations in a clean, sightly, safe and first-class condition. Such maintenance to the extent not performed by a governmental or quasi-governmental authority or a Tenant or Subtenant shall include, but shall not be limited to: (1) the repair, replacement, renewal and cleaning of all lighting fixtures, signs, entrance monuments and markers, traffic control signals and signs; and (ii) the mowing, watering, fertilizing, replanting and replacing of landscaping. The maintenance of dedicated streets shall exclude repairs or reconstruction of such streets.

SECTION EIGHT
ENFORCEMENT

8.1 ABATEMENT AND SUIT. The regulations and restrictions herein contained shall run with the land and be binding upon and inure to the benefit of Landlord, the Tenant, Subtenants and the Occupants of every Building Site. These regulations and restrictions may be enforced as provided hereafter by Landlord acting for itself, and the Architectural Review Committee on behalf of Landlord or all Tenants. Each Tenant, by acquiring an interest in the Land, irrevocably appoints Landlord and the Architectural Review Committee as its attorney-in-fact for such purposes; provided, however, that if a Tenant or Subtenant notifies Landlord in writing of a claimed violation of these Regulations and Restrictions and fails to take effective action within thirty (30) days after receipt of such notification, then, and only in that event, a Tenant or Subtenant may separately, at its own cost and expense, enforce these Regulations and Restrictions as herein provided. All Tenants and Subtenants seeking to enforce these Regulations and Restrictions shall be bound by all waivers issued by the Landlord. Violation or breach of any restriction herein contained shall give to Landlord the right to enter the Building Site upon or as to which said violation or breach exists and to summarily abate and remove, at the expense of the Tenant or Subtenant thereof any Improvement or condition that may be or exist thereon contrary to the intent and meaning of the provisions hereof, and to prosecute an appropriate proceeding at law or in equity against the person or persons who have violated or are attempting to violate any of these Regulations and Restrictions to enjoin or prevent them from doing so, to cause said violation to be remedied or to recover damages for said violation.

In any legal or equitable proceeding for the enforcement or to restrain the violation of these Regulations and Restrictions or any provisions hereof, the losing party or parties shall pay the attorney's fees of the prevailing party or parties, in such amount as may be fixed by the court in such proceedings. All remedies provided herein or at law or in equity shall be cumulative and not exclusive.

8.2 INSPECTION. Landlord may from time to time at any reasonable hour or hours, enter and inspect any property subject to these Regulations and Restrictions to ascertain compliance therewith.

8.3 RESPONSIBILITY FOR AND FAILURE TO ENFORCE RESTRICTIONS. Landlord shall not be liable for enforcement of or for failure to enforce any provision, restriction or condition of these Regulations and Restrictions and the failure of Landlord or any Tenant or Subtenant to enforce any of the provisions, restrictions or conditions of these Regulations and Restrictions shall in no event be deemed a waiver of the right to do so thereafter or to enforce any other provision, restriction of condition.

8.4 DEEMED TO CONSTITUTE A NUISANCE. Every violation of these Regulations and Restrictions or any part thereof is hereby declared to be and to constitute a nuisance, and every public or private remedy allowed thereof by law or equity against a Tenant, Subtenant or Occupant shall be applicable against every such violation and may be exercised by Landlord.

8.5 LIQUIDATED DAMAGES. Notwithstanding any other provision of these Regulations and Restrictions to the contrary, upon violation of any provision of these Regulations and Restrictions or the Park Development Standards, which violation is of a kind and nature that damages resulting therefrom are not easily determinable or ascertainable, the Tenant or Subtenant who commits such violation or whose Occupants commit such violation and shall be liable for an amount equal to Five Hundred Dollars ($500.00) as liquidated damages for each day during which such violation continues to incur. All damages accruing to the benefit of the Landlord which are in the form of liquidated damages shall constitute a lien upon the Building Site and the Improvements of such Tenant or Subtenant and may be enforced as set forth in Section 7.7 hereof, subordinate to any valid Mortgages as provided therein.

8.6 CERTIFICATE OF COMPLIANCE. Upon payment of a reasonable fee as determined by Landlord from time to time, and upon written request of any Tenant or Subtenant; Occupant; prospective Subtenant or Occupant; Mortgagee; or prospective Mortgagee of any real property covered by these Regulations and Restrictions, Landlord shall issue an acknowledged certificate in recordable form setting forth the amounts of any unpaid assessments, if any, and setting forth generally whether or not to the best of

Landlord's knowledge said Tenant or Subtenant is in violation of any of the terms and conditions of these Regulations and Restrictions, and said Certificate shall be conclusive upon Landlord in favor of the persons who rely thereon in good faith other than a Tenant or Subtenant who is in violation of any such terms and conditions. Such certificate shall be furnished by Landlord within a reasonable time, but not to exceed thirty (30) days, from the receipt of a written request for such

SECTION NINE
RIGHTS IN COMMON PROPERTIES

9.1 TENANTS, EASEMENTS AND RIGHTS OF ENJOYMENT. Subject to the provisions hereinafter set forth in this Section 9, every Tenant and Subtenant shall have a right and easement of enjoyment in and to the General Common Properties and such easement shall be appurtenant to and shall pass with any leasehold interest to every Building Site which is subject to these Regulations and Restrictions.

9.2 RESERVATION OF CERTAIN RIGHTS TO LANDLORD IN THE GENERAL COMMON PROPERTIES. The rights and easements of enjoyment created hereby with respect to the General Common Properties shall be subject to the following:

(a) The right of Landlord to dedicate or transfer all or any part of the General Common Properties to any public agency, authority or utility company serving the Land, for such purposes and on such conditions as may be agreed to by Landlord consistent with the intent of these Regulations and Restrictions.

(b) The right of the Landlord to grant easements and/or rights-of-way to such utility companies or public agencies or authorities as it shall deem necessary for the proper service and maintenance of the Land and Tenants or Subtenants shall be obligated to grant such easements and/or rights-of-way upon the request of the Architectural Review Committee, as provided in Section 6, from time to time.

(c) The rights of Landlord to grant temporary easements upon the General Common Properties for storage of construction materials, dirt and similar items to Tenants and Subtenants, or to Landlord during the construction of Improvements upon any areas within the Land; provided, however, that following the completion of such construction, such grantees shall forthwith proceed to remove all materials and dirt from the General Common Properties and restore the same to their condition existing immediately prior to their use therefore, or to a condition acceptable to the Architectural Review Committee, all at the sole cost and expense of said Tenant, Subtenant or Landlord or as the case may be. If the grantee(s) shall fail to undertake and complete such removal and restoration within sixty (60) days after such completion of construction, Landlord may, at its option, after giving such grantee ten (10) days' prior written notice (unless within said ten (10) day period such grantee shall proceed and thereafter pursue with diligence such removal and restoration), undertake and complete the removal of all materials and dirt from the General Common Properties and restore the same to their condition existing immediately prior to their use therefore or to a condition acceptable to the Architectural Review Committee. If Landlord undertakes and completes such removal and restoration because of the failure of the grantee to complete the same, the cost of such removal and restoration shall be assessed against the grantee; and if such assessment is not paid within thirty (30) days after written notice of such assessment from Landlord to said grantee, it shall constitute a lien on the Building Site, including Improvements thereon, for whose benefit the easement was granted and may be enforced as set forth in Section 7 thereof.

(d) The right of Landlord to impose reasonable regulations and restrictions regarding the General Common Properties in addition to those set forth herein at the time of conveyance of such real properties, and such regulations and restrictions, will be incorporated by reference and made a part of these Regulations and Restrictions.

(e) The right of Landlord to adjust or grant private access easements over the General Common

Properties in addition to or in substitution for platted easement rights if, in the opinion of the Architectural Review Committee, such adjustments or grants would be desirable.

(f) The right of Landlord to (1) enter into lease agreements, either as lessee or lessor, with third parties, for purposes and subject to such conditions as they may deem appropriate; (2) enter into contractual or reciprocal agreements with third parties to provide, receive or exchange services; provided, however, that Landlord shall be fully reimbursed for its costs and expenses incurred in providing such services; (3) contract with governmental entities for the rental and use of equipment and/or exchange of services on a fee basis or otherwise; (4) construct emergency facilities; and (5) erect informational signs as appropriate.

9.3 EASEMENTS AND RIGHTS OF ENJOYMENT IN THE PARKING AND ROADWAY EASEMENTS. Subject to the provisions hereinafter set forth in this Section 9, Landlord and the Tenants and Subtenants specified or designated by Landlord, shall have a right and easement of enjoyment in and to the Parking and Roadway Easements located on individual Building Sites as established from time to time by the Architectural Review Committee by the recording of a Declaration of Easement in the office of the Clerk and Recorder of Bernalillo County, New Mexico, in accordance with the provisions of Section 6.

9.4 TITLE TO PARKING AND ROADWAY EASEMENTS. Landlord and the Tenants and Subtenants specified or designated by Landlord, shall be designated as grantees in the Declaration of Easement to be granted by a Tenant with respect to the Parking and Roadway easement to be located on his Building Site. Such easement shall be for the benefit and enjoyment of Landlord and such Tenants and Subtenants, as specified or designated by Landlord. Notwithstanding anything contained herein to the contrary, the Tenant of any Building Site shall always retain legal title to the leasehold estate encumbered by the Parking and Roadway Easement.

9.5 EXTENT OF RIGHTS AND PRIVILEGES IN THE PARKING AND ROADWAY EASEMENTS. The rights and privileges of enjoyment in the Parking and Roadway easements created hereby shall be subject to the following:

(a) The right of any Tenant to grant easements and rights-of-way over, across and under the Parking and Roadway Easement located upon such Tenant's Building Site to such utility companies, public agencies or authorities as he shall deem necessary for the proper service and maintenance of its Building Site, and said Tenant shall be obligated to make such grant upon the request of Landlord from time to time.

(b) The right of any Tenant to grant temporary easements for storage of construction materials, dirt and similar items upon the Parking and Roadway Easement located upon its Building Site to any other Tenant, Subtenant or to Landlord during the construction of Improvements upon any areas within the Land; provided, however, that following completion of such construction, such grantee(s) shall forthwith proceed to remove all materials and dirt from the Parking and Roadway Easement and restore the same to its condition existing immediately prior to its use therefore, or to a condition acceptable to the Architectural Review Committee, all at the sole cost and expense of said grantee.

9.6 PROPERTY RIGHTS AND RESTRICTIONS ON SPECIAL COMMON PROPERTIES. As provided above, Landlord reserves the right to set aside from time to time certain portions of the Land as Special Common Properties for the benefit of more than one (1) but no less than all Building Sites. In addition, the Tenants or Subtenants of any combination of Building Sites shall have the right with respect to their Building Sites to set aside from time to time certain portions thereof as Special Common Properties after first having the written approval of Landlord, Tenants or Subtenants, as the case may be, shall have the right to designate and determine (i) the nature, type and kind thereof; (ii) the entity which shall hold title thereto; (iii) the time when title will be conveyed; (iv) the parties who shall have a right and easement of enjoyment in and to the same; and (v) the basis for allocation of expenses by assessment for the installation, repair, maintenance and servicing of Improvements to be located on the Special Common Properties. The person or entity holding title to any Special Common Property shall have the right of

assessment against the Building Site of any Tenant or Subtenant permitted to use such Special Common Properties in the same manner as Landlord is herein granted such rights with respect to the General Common Properties. Such assessments shall likewise constitute a lien against the Building Site of said Tenant or Subtenant permitted to use such Special Common Properties and shall become due and payable in all respects as provided in Section 7 hereof.

9.7 USE OF GENERAL AND SPECIAL COMMON PROPERTIES BY LANDLORD. Landlord shall each have the right to use all General and Special Common Properties, including streets, private roads, walkways, trails and other areas within the Project for purposes of providing the services which it is obligated to perform hereunder.

9.8 EASEMENTS AND RIGHTS OF ENJOYMENT IN THE LANDSCAPE BUFFER. Subject to the provisions hereinafter set forth in this Section 9, Landlord and Tenants and Subtenants specified or designated by Landlord shall have a right and easement of enjoyment in and to the Landscape Buffer located in individual Building Sites as established from time to time by the Architectural Review Committee by the recording of a Declaration of Easement in the office of the Clerk and Recorder of Bernalillo County, New Mexico, in accordance with the provisions of Section 6 hereof.

9.9 TITLE TO LANDSCAPE BUFFER. Landlord and the Tenants and Subtenants specified or designated by Landlord shall be designated as grantee in the Declaration of Easement to be granted by a Tenant with respect to the Landscape Buffer to be located on its Building Site. Such easements shall be for the benefit and enjoyment of Landlord and such Tenants and Subtenants as specified or designated by Landlord for the purpose of installing and maintaining (including repair and replacement) certain landscape improvements thereon. Notwithstanding anything contained herein to the contrary, the Tenant of any Building Site retains legal title to the leasehold estate encumbered by the Landscape Buffer.

9.10 EASEMENTS AND RIGHTS OF ENJOYMENT IN THE PEDESTRIAN EASEMENTS. Subject to the provisions hereinafter set forth in this Section 9, Landlord and Tenants and Subtenants as specified or designated by Landlord shall have a right and easement of enjoyment to the Pedestrian Easements located on individual Building Sites as established from time to time by the Architectural Review Committee by the recording of a Declaration of Easement in the office of the Clerk and Recorder of Bernalillo County, New Mexico, in accordance with the provisions of Section 6.

9.11 TITLE TO PEDESTRIAN EASEMENTS. The Landlord and Tenants and Subtenants as specified or designated by Landlord shall be designated as grantees in the Declaration of Easement to be granted by a tenant with respect to the Pedestrian Easements to be located upon its Building Site. Such Pedestrian Easements shall be for the benefit and enjoyment of the Landlord and the Tenants or Subtenants as specified or designated by Landlord. Notwithstanding anything contained herein to the contrary, the Tenant of any Building Site retains legal title to the leasehold estate encumbered by the Pedestrian Easements and shall maintain the same.

9.12 EASEMENTS AND RIGHTS OF ENJOYMENT IN THE SIGNAGE EASEMENTS. Subject to the provisions hereinafter set forth in this Section, the Landlord and the Tenants or Subtenants as specified or designated by Landlord shall have a right and easement of enjoyment in and to the Signage Easements located on individual Building Sites as established from time to time by the Architectural Review Committee by the recording of a Declaration of Easement in the office of the Clerk and Recorder of Bernalillo County, New Mexico, in accordance with the provisions of Section 6 hereof.

9.13 TITLE TO SIGNAGE EASEMENTS. Landlord and the Tenants or Subtenants as specified or designated by Landlord shall be designated as grantee in the Declaration of Easement to be granted by a Tenant with respect to the Signage Easements to be located in his Building Site. Such Signage Easements shall be for the benefit and enjoyment of Landlord and the Tenants or Subtenants as specified or designated by Landlord. Notwithstanding anything contained herein to the contrary, the Owner of any Building Site retains legal title to the leasehold estate encumbered by the Signage Easements.

SECTION TEN
DURATION, MODIFICATION AND TERMINATION

10.1 DURATION AND TERMINATION. These Regulations and Restrictions, and the provisions, restrictions and conditions combined herein shall run with and bind the Land and shall remain the effect, and shall inure to the benefit of, and be enforceable by Landlord and any Tenant or Subtenant of a portion of the Land subject to the Regulations and Restrictions, their heirs, personal representatives, successors in interest and assigns for the term of the Parcel Ground Lease.

10.2 MODIFICATION AND TERMINATION DURING THE TERM. During the term of the Parcel Ground Lease these Regulations and Restrictions, or any provision hereof, may be altered, removed, modified or terminated, as to the Land, or any portion thereof by Landlord, at its sole discretion, upon written notice to all Tenants, but not Subtenants or Occupants, of the Land. No amendment to these Regulations and Restrictions shall be effective unless and until written notice stating the proposed amendment shall have been sent to every Tenant, but not Subtenants or Occupants, at least sixty (60) days in advance of any action taken. Any such termination, extension, modification or amendment shall be immediately effective upon the expiration of said sixty (60) day notification period. Any amendment will require the consent of Tenants only to the extent required by the Parcel Ground Lease applicable to such Tenant.

10.3 WAIVER. Landlord, without the consent of any third party, may waive any of the provisions of these Regulations and Restrictions and any of the provisions of the Park Development Standards. No such waiver shall be enforceable unless it is contained in writing signed by the Landlord.

SECTION ELEVEN
MISCELLANEOUS

11.1 MORTGAGES – DEEDS OF TRUST. Breach of any of the foregoing covenants, regulations and restrictions, shall not defeat or render void the lien of any mortgage or deed of trust made in good faith and for value within the Land; but said covenants, regulations and restrictions, shall be binding upon and effective against any Tenant or Subtenant whose title thereto is acquired by foreclosure trustee’s sale or otherwise.

11.2 CONFLICTS. Zoning ordinances, building codes and regulations, and any other governmental restrictions and requirements shall be observed. In the event of any conflict between these Regulations and Restrictions and any such governmental codes, regulations, restrictions and requirements, the more restrictive standards shall apply. Any approval of Landlord required in these Regulations and Restrictions, does not in any way relieve Tenants, Subtenants and Occupants from obtaining approvals required by any governmental body having jurisdiction.

11.3 EFFECT OF DEVELOPMENT PLAN AND OTHER DOCUMENTS FILED WITH GOVERNMENT AGENCIES. Any plans, studies, drawings and related documents concerning the development of the Land (“Master Plan” documents) which have been filed or will be filed in the future with the City of Albuquerque or Bernalillo County, or any other applicable governmental agency, shall have the effect, and only the effect, described in the Statutes for the State of New Mexico, and zoning codes, ordinances and the rules and regulations of said county and City of Albuquerque. The Master Plan, in part, and related documents constitute part of the public control imposed by the County and the City of Albuquerque upon Landlord, Tenants, Subtenants and Occupants of the Land and shall not create, nor shall be intended to create, any private property or contract rights in the Landlords, Tenants, Subtenants and Occupants’ property, except as such rights may be created expressly by separate contracts, leases, deeds and other documents, including these Regulations and Restrictions. The Master Plan shall confer maximum benefits upon all Tenants, Subtenants and Occupants when all of its elements are planned and developed in appropriate relationship with each other. The Master Plan describes a plan of development which Landlord believes will provide maximum benefit to the Tenants, Subtenants, Occupants and the public. During an extended development program, however, various factors may intervene which might hinder the effectiveness of the Master Plan and which might threaten the benefits to be derived by the Tenants, Subtenants, their Occupants and the public, unless the Master Plan can be modified as prescribed

under the applicable law and these Regulations and Restrictions. Accordingly, these Regulations and Restrictions are not intended to, nor does it grant nor create any private property or contract rights in the Master Plan and the Master Plan shall continue to remain subject to modifications by Landlord and the proper governmental authorities, to the extent applicable, in accordance with the procedures set forth in the statutes, rules and regulations of the City of Albuquerque and the County of Bernalillo, State of New Mexico.

11.4 BENEFITS AND BURDENS. The terms and provisions contained in these Regulations and Restrictions shall be binding upon and inure to the benefit of Landlord, all Tenants, Subtenants and Occupants, and their respective heirs, successors, personal representatives and assigns.

11.5 NOTICES. Any notice required to be sent to any Tenant or Subtenant under the provisions of these Regulations and Restrictions shall be deemed to have been properly delivered when delivered in person or when mailed by certified mail, return receipt requested, with proper postage prepaid, to the last known address of said Tenant or Subtenant in the records of Landlord at the time of such mailing, or as reflected in the records of the Clerk and Recorder of Bernalillo County, if there are no such Landlord records.

11.6 NO WAIVER. Failure of any person or entity designated herein to enforce any provision of these Regulations and Restrictions shall in no event be deemed to be a waiver of the right to do so or any subsequent violations. Moreover, the right to enforce and any other provisions of these Regulations and Restrictions shall not be waived by such failure, nor shall there be any liability therefore.

11.7 SINGULAR AND PLURAL. Words used herein, regardless of the number and gender specifically used, shall be deemed and construed any other number (singular or plural) or gender (masculine, feminine or neuter) as the context requires.

11.8 OWNER'S LIABILITY SUBSEQUENT TO SALE. Upon sale or transfer of Tenant's entire interest in its Building Site, the Tenant so selling or transferring shall not have any further liability for the obligations thereon which accrue against the Building Site sold after the date of the conveyance; provided, however, that nothing herein shall be construed so as to relieve a Tenant of any Building Site from any liabilities or obligations incurred prior to such sale or transfer pursuant to these Regulations and Restrictions. Furthermore, any such sale or transfer shall not modify or alter the terms of any Plans and Specifications previously submitted and approved by the Architectural Review Committee and any subsequent Tenant shall be required to comply with any such plan.

11.9 SEVERABILITY. Invalidation of any one or more of the provisions of these Regulations and Restrictions by judgment or court shall in no way affect any of the other provisions which shall remain in full force and effect.

11.10 ASSIGNABILITY OF LANDLORD'S RIGHTS AND DUTIES. Any and all of the rights, powers and reservations of Landlord herein contained may be assigned in Landlord's sole discretion to any person, corporation or association (including the Association as provided in Section 11.11) which will assume the duties of Landlord pertaining to the particular rights, powers and reservations assigned, and upon any such person, corporation or association's evidencing its consent in writing to accept such assignment and assume such duties. Such person, corporation or association shall, to the extent of such assignment, have the same rights and powers and be subject to the same obligations and duties as are given to and assumed by Landlord herein.

11.11 ASSOCIATION. Subject to provisions of Section 11.10 above, Landlord shall have the right to assign its right, title, interest and obligations to an Association of Tenants pursuant to the provisions of this Section (The ''Association"). The Association shall be subject to the following provisions:

A. Every Tenant shall automatically be a member (a "Member") of the Association. No person or entity who holds any interest merely as a security for performance of an obligation or who is merely a lessee or tenant under a lease for the property or who is merely an occupant shall be a Member.

B. Each Tenant shall be entitled to a pro rata vote in the Association based upon the percentage of the total land area of Tenant's Building Site (excluding the portions of the property deeded or dedicated to the City of Albuquerque) owned by such Tenant or as specified in the Declaration of Covenants, Conditions and Restrictions of the Association. When more than one person shall held an ownership interest or interest in any Building Site, all such persons shall be Members, and the vote(s) provided for herein as a result of such joint ownership shall be exercised among themselves as they determine, but in no event aggregating more than the total percentage ownership attributable to such Building Site. Upon condominiumizing of any Building Site, such Condominium Declaration shall prescribe the division of votes among the individual condominium owners.

C. Any action by the Association shall be on the basis of no less than a majority vote of the votes of Members voting upon such action.

11.12 CONDOMINIUMS AND SUBDIVIDING OF BUILDING SITES.

A. The subdivision of any Building Site into two (2) or more parcels or the creation of a system of condominium ownership of a Building Site or Building thereon shall be subject to the prior approval of Landlord and the Tenant thereof. Landlord shall have the right but not the obligation to approve such proposals and no covenant is herein made by Landlord that any resubdividing or condominiumizing will be so approved. Any such subdivision or creation of a condominium may be made subject to such conditions as may be imposed by Landlord and the Tenant thereof, including, but not limited to, provisions for the creation of Special Common Properties and the addition of General Common Properties in accordance with the provisions of these Regulations and Restrictions.

B. All subdivision, or resubdivisions, of a Building Site shall be accomplished in accordance with the applicable governmental laws, rules and regulations and any documents to be submitted to governmental agencies or recorded to accomplish such subdividing, or resubdividing, shall be subject to the Landlord's prior written approval.

C. Documents creating a system of condominium ownership on any Building Site shall be subject to the prior approval of Landlord. The documents shall provide that the condominium association shall be liable for the collection and payment to Landlord of ail assessments due to be paid under the Declaration by Owners of the Building Site and that Landlord shall have a lien against the entire condominium project for any unpaid assessments, in accordance with the provisions of these Regulations and Restrictions. Such condominium declaration also shall prescribe the voting method among the individual condominium owners that will constitute the procedure for establishing the vote of the "Tenant" where called for in these Regulations and Restrictions.

11.13 NOTICE AND ACCEPTANCE. Every person who now or hereafter owns or acquires any right, title, estate or interest in or to any portion of the Land is and shall be conclusively deemed to have consented and agreed to every covenant, regulation and restriction contained herein, provided reference to these Regulations and Restrictions is contained in the original conveyance from Landlord to the first Tenant.

11.14 PARAGRAPH HEADINGS. Paragraph headings are inserted for convenience only and are not intended to be part of these Regulations and Restrictions or in any way to define, limit or describe the scope or intent of the particular paragraph to which they refer.

EXHIBIT "C"

PARKING STRUCTURE

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EXHIBIT C

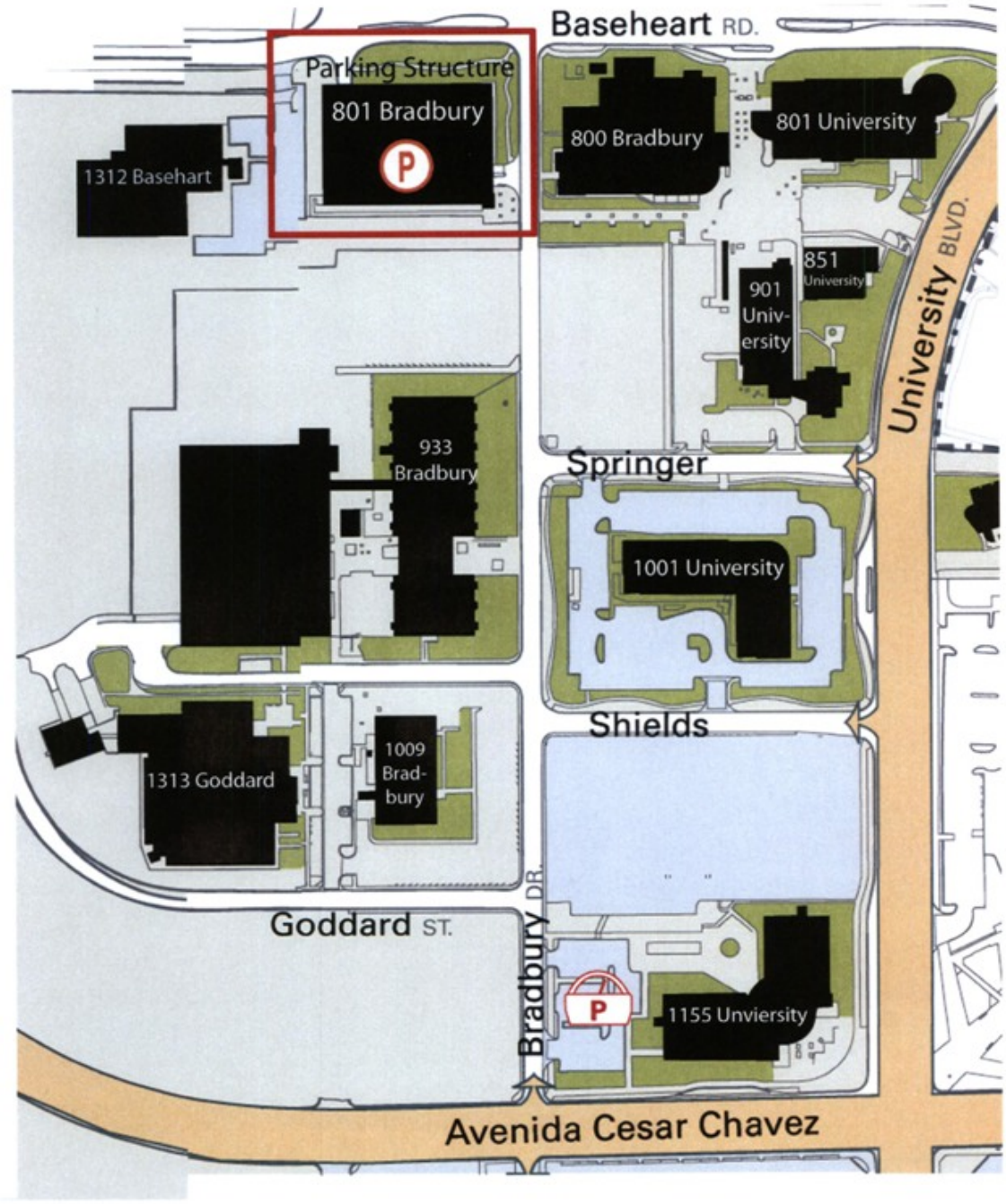
Baseheart RD.
Parking Structure
801 Bradbury
P
1312 Basehart
800 Bradbury
801 University
851 University
901 Univ-ersity
University BLVD.
933 Bradbury
Springer
1001 University
Shields
1313 Goddard
1009 Brad-bury
Goddard ST.
Bradbury DR.
P
1155 Unviersity
Avenida Cesar Chavez

EXHIBIT "D"

BUILDING RULES AND REGULATIONS

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BUILDING RULES AND REGULATIONS

1. The sidewalk, passages, exits and entrances shall not be obstructed by Tenant or used for any purpose other than for ingress to and egress from Premises. The Landlord shall in all cases retain the right to control and prevent access by all persons whose presence, in the judgment of the Landlord, shall be prejudicial to the safety, character, reputation and interests of the Project and its tenants, provided that nothing herein contained shall be construed to prevent such access to persons in the ordinary course of Tenant's business, unless such persons are engaged in illegal activities. Tenant and employees or invitees of tenant shall not walk upon the roof of the Building.

2. No awning or shade shall be affixed or installed over the windows on the exterior of the Premises. The windows of the Building shall not be permanently covered or obstructed by Tenant.

3. Landlord reserves the right to prescribe the weight and position of all safes and other heavy equipment so as to distribute properly the weight thereof and to prevent any unsafe condition from arising. Safes or other heavy objects shall, if considered necessary by Landlord, stand on wood strips of such thickness as is necessary to properly distribute the weight. Landlord will not be responsible for any loss or damage to any such property from any cause; but all damage done to the Building by moving or maintaining any such property shall be repaired at the expense of Tenant.

4. Tenant and Tenant's officers, agents and employees shall not make or permit any loud, unusual or improper noises, nor interfere in any way with other tenants of the Project or those having business with them.

5. No aerial shall be erected on the roof or exterior walls of the Premises, or on the grounds, without in each instance, the written consent of the Landlord.

6. Tenant shall not lay linoleum, tile, carpet or other similar floor covering so that the same shall be affixed to the floor of the Building in any manner except as approved by Landlord. The expense of repairing any damage resulting from a violation of this rule or removal of any floor covering shall be borne by the Tenant.

7. Tenant agrees that it shall comply with all reasonable fire and security regulations that may be issued from time to time by Landlord, and Tenant also shall provide Landlord with the name of a designated responsible employee to represent Tenant in all matters pertaining to such fire or security regulations.

8. Landlord reserves the right by written notice to Tenant to add to, rescind, alter, or waive these rules and regulations at any time prescribed for the Building when, in Landlord s reasonable judgment, it is necessary, desirable or proper for the best interest of the Project and its tenants.

9. Tenant shall not disturb, solicit or canvass any occupant of the Project and shall cooperate to prevent the same.

10. No skateboarding shall be allowed on the grounds of the Project.

It is understood and agreed between Tenant and Landlord that no assent or consent to any waiver of any part hereof by Landlord in spirit or letter shall be deemed or taken as made except when the same is done in writing and attached to or endorsed hereon by Landlord.

In the event of any conflict between these rules and regulations or any further or modified rules and regulations shall from time to time issued by Landlord and the Building Lease provisions, the Building Lease provisions shall govern and control.

EXHIBIT “E”

INSURANCE CERTIFICATES

To be provided by the Tenant.

EXHIBIT "F"

TENANT IMPROVEMENTS

Landlord shall provide, at Landlord's expense, improvements to the premises limited to, demising suite according to the premises as outlined in Exhibit "A," carpet tiled area in 112-A, and clean existing carpet throughout Suite. Any additional tenant improvements shall be approved by the Landlord and at Tenant's sole cost.

Exhibit 10.27

FIRST AMENDMENT TO LEASE

THIS FIRST AMENDMENT ("FIRST Amendment") is made by and between the Regents of the University of New Mexico, a body corporate of the State of New Mexico, as Landlord, and Exagen Diagnostics, Inc., as Tenant.

WHEREAS, in May 2013, Tenant entered into a Lease with Landlord for space at 800 Bradbury Dr.SE known as Suite 108 (the "Lease"); and

WHEREAS, Tenant desires, and Landlord agrees, to Tenant's First Option to Extend Initial Term and.

NOW THEREFORE, Tenant and Landlord mutually agree and covenant as follows:

1. Landlord and Tenant agree to extend the Lease Term for six (6) months by exercising Tenant's First Option to Extend Initial Term, pursuant to paragraph 3.02 of the Lease. The parties agree that the First Option term shall be reduced from one (1) year to six (6) months to commence June 1, 2014 and expire on November 30, 2014.
2. All capitalized terms used, but not defined, in this First Amendment shall have the meaning ascribed to them in the Lease.
3. Except as amended herein, all other terms and conditions of the Lease shall remain unmodified and in full force and effect.

IN WITNESS WHEREOF, the parties have caused this First Amendment to be executed by their duly authorized representatives.

LANDLORD: The Regents of the University of New Mexico

/s/ David W. Harris
By: David W. Harris
Its: EVP for Administration, COO & CFO

/s/ Bruce Cherrin
By: Bruce Cherrin
Its: Chief Procurement Officer

TENANT: Exagen Diagnostics, Inc.,

/s/ Wendy Swedick
By: Wendy Swedick
Its: Chief Financial Officer and Chief Operations Officer

Exhibit 10.28

SECOND AMENDMENT TO LEASE

THIS SECOND AMENDMENT ("Second Amendment") is made by and between the Regents of the University of New Mexico, a body corporate of the State of New Mexico, as Landlord, and Exagen Diagnostics, Inc., as Tenant.

WHEREAS, in May 2013, Tenant entered into a Lease with Landlord for space at 800 Bradbury Dr.SE known as Suite 108 (the "Lease");

WHEREAS, in April 2014, Tenant entered into a First Amendment to lease, exercising its First Option to extend the initial term of the Lease Agreement for six (6) additional months; and

WHEREAS, Tenant now desires, and Landlord agrees, to extend the Lease Term by an additional six (6) months.

NOW THEREFORE, Tenant and Landlord mutually agree and covenant as follows:

1. Landlord and Tenant agree to extend the Lease Term for six (6) months to commence December 1, 2014 and expire on May 31, 2015.
2. The monthly rent amount shall remain, Four Thousand Two Hundred and Five Dollars and Thirty-four cents ($4,205.34).
3. All capitalized terms used, but not defined, in this Second Amendment shall have the meaning ascribed to them in the Lease.

4. Except as amended herein, all other terms and conditions of the Lease shall remain unmodified and in full force and effect.

IN WITNESS WHEREOF, the parties have caused this Second Amendment to be executed by their duly authorized representatives.

LANDLORD: The Regents of the University of New Mexico

/s/ David W. Harris
By: David W. Harris
Its: EVP for Administration, COO & CFO

/s/ Bruce Cherrin
By: Bruce Cherrin
Its: Chief Procurement Officer

TENANT: Exagen Diagnostics, Inc.,

/s/ Wendy Swedick
By: Wendy Swedick
Its: Chief Financial Officer and Chief Operations Officer

Exhibit 10.29

THIRD AMENDMENT TO LEASE

THIS THIRD AMENDMENT ("Third Amendment") is made by and between the Regents of the University of New Mexico, a body corporate of the State of New Mexico, as Landlord, and Exagen Diagnostics, Inc., as Tenant.

WHEREAS, in May 2013, Tenant entered into a Lease with Landlord for space at 800 Bradbury Dr.SE known as Suite 108 (the "Lease");

WHEREAS, in April 2014, Tenant entered into a First Amendment to lease, exercising its First Option to extend the initial term of the Lease Agreement for six (6) additional months;

WHEREAS, in November 2014, Tenant entered into a Second Amendment to Lease, to extend the initial term of the Lease Agreement for six (6) additional months; and

WHEREAS, Tenant now desires, and Landlord agrees, to extend the Lease Term by six (6) months.

NOW THEREFORE, Tenant and Landlord mutually agree and covenant as follows:

1. Landlord and Tenant agree to extend the Lease Term for six (6) months to commence June 1, 2015 and expire on November 30, 2015.

2. The monthly rent amount shall remain, Four Thousand Two Hundred and Five Dollars and Thirty-four cents ($4,205.34).

3. All capitalized terms used, but not defined, in this Third Amendment shall have the meaning ascribed to them in the Lease.

4. Except as amended herein, all other terms and conditions of the Lease shall remain unmodified and in full force and effect.

IN WITNESS WHEREOF, the parties have caused this Third Amendment to be executed by their duly authorized representatives.

LANDLORD: The Regents of the University of New Mexico

/s/ David W. Harris
By: David W. Harris
Its: EVP for Administration, COO & CFO

/s/ Bruce Cherrin
By: Bruce Cherrin
Its: Chief Procurement Officer

TENANT: Exagen Diagnostics, Inc.,

/s/ Wendy Swedick
By: Wendy Swedick
Its: Chief Financial Officer

AIR COMMERCIAL REAL ESTATE ASSOCIATION
STANDARD INDUSTRIAL/COMMERCIAL SINGLE-TENANT LEASE — NET

(DO NOT USE THIS FORM FOR MULTI-TENANT BUILDINGS)

1. Basic Provisions (“Basic Provisions”).

1.1 **Parties:** This Lease (**“Lease”**), dated for reference purposes only August 15, 2014, is made by and between Geiger Court, LLC (**“Lessor”**) and Exagen Diagnostics, Inc. (**“Lessee”**), (collectively the **“Parties,”** or individually a **“Party”**).

1.2 **Premises:** That certain real property, including all improvements therein or to be provided by Lessor under the terms of this Lease, and commonly known as 1221 Liberty Way, located in the County of San Diego, State of California, and generally described as (describe briefly the nature of the property and, if applicable, the **“Project”**, if the property is located within a Project) an approximately 19,504 SF freestanding industrial building (**“Premises”**). (See also Paragraph 2)

1.3 **Term:** 3 years and 0 months (**“Original Term”**) commencing February 1, 2015 (**“Commencement Date”**) and ending January 31, 2018 (**“Expiration Date”**). (See also Paragraph 3)

1.4 **Early Possession:** If the Premises are available Lessee may have non-exclusive possession of the Premises commencing upon completion of tenant improvements (**“Early Possession Date”**). (See also Paragraphs 3.2 and 3.3 and 51)

1.5 **Base Rent:** $15,798.00 per month (**“Base Rent”**), payable on the first day of each month commencing February 1, 2015. (See also Paragraph 4 & 50)

☒ If this box is checked, there are provisions in this Lease for the Base Rent to be adjusted. See Paragraph 50

1.6 **Base Rent and Other Monies Paid Upon Execution:**

(a) **Base Rent:** $N/A for the period See Paragraph 57.

(b) **Security Deposit:** $20,206.00 (**“Security Deposit”**). (See also Paragraph 5 & 55)

(c) **Association Fees:** $N/A for the period N/A

(d) **Other:** $N/A for N/A.

(e) **Total Due Upon Execution of this Lease:** $20,206.00 (see paragraph 55).

1.7 **Agreed Use:** General office and warehouse storage for a diagnostics company. (See also Paragraph 6)

1.8 **Insuring Party:** Lessor is the **“Insuring Party”** unless otherwise stated herein. (See also Paragraph 8)

1.9 **Real Estate Brokers:** (See also Paragraph 15 and 25)

(a) **Representation:** The following real estate brokers (the **“Brokers”**) and brokerage relationships exist in this transaction (check applicable boxes):

☒ Lee & Associates - Merz/Knoke represents Lessor exclusively (**“Lessor’s Broker”**);

☒ Cassidy Turley - Steven Field represents Lessee exclusively (**“Lessee’s Broker”**); or

☐ _____ represents both Lessor and Lessee (**“Dual Agency”**).

(b) **Payment to Brokers:** Upon execution and delivery of this Lease by both Parties, Lessor shall pay to the Brokers the brokerage fee agreed to in a separate written agreement (or if there is no such agreement, the sum of N/A or N/A % of the total Base Rent) for the brokerage services rendered by the Brokers.

1.10 **Guarantor.** The obligations of the Lessee under this Lease are to be guaranteed by N/A (**“Guarantor”**). (See also Paragraph 37)

1.11 **Attachments.** Attached hereto are the following, all of which constitute a part of this Lease:

☒ an Addendum consisting of Paragraphs 50 through 61;

☒ a plot plan depicting the Premises; Exhibit A

☐ a current set of the Rules and Regulations;

☐ a Work Letter;

☐ a energy disclosure addendum is attached;

☒ other (specify): Option to Extend, Standard Lease Disclosure.

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2. Premises.

2.1 **Letting.** Lessor hereby leases to Lessee, and Lessee hereby leases from Lessor, the Premises, for the term, at the rental, and upon all of the terms, covenants and conditions set forth in this Lease. While the approximate square footage of the Premises may have been used in the marketing of the Premises for purposes of comparison, the Base Rent stated herein is NOT tied to square footage and is not subject to adjustment should the actual size be determined to be different. **Note: Lessee is advised to verify the actual size prior to executing this Lease**.

2.2 **Condition.** Lessor shall deliver the Premises to Lessee broom clean and free of debris on the Commencement Date or the Early Possession Date, whichever first occurs (**"Start Date"**), and, so long as the required service contracts described in Paragraph 7.1(b) below are obtained by Lessee and in effect within thirty days following the Start Date, warrants that the existing electrical, plumbing, fire sprinkler, lighting, heating, ventilating and air conditioning systems (**"HVAC"**), loading doors, sump pumps, if any, and all other such elements in the Premises, other than those constructed by Lessee, shall be in good operating condition on said date, that the structural elements of the roof, bearing walls and foundation of any buildings on the Premises (the **"Building"**) shall be free of material defects, and that the Premises do not contain hazardous levels of any mold or fungi defined as toxic under applicable state or federal law, If a non-compliance with said warranty exists as of the Start Date, or if one of such systems or elements should malfunction or fail within the appropriate warranty period, Lessor shall, as Lessor's sole obligation with respect to such matter, except as otherwise provided in this Lease, promptly after receipt of written notice from Lessee setting forth with specificity the nature and extent of such non-compliance, malfunction or failure, rectify same at Lessor's expense. The warranty periods shall be as follows: (i) 12 ~~6~~ months as to the HVAC systems, and (ii) ~~30 days~~ 12 months as to the remaining systems and other elements of the Building. If Lessee does not give Lessor the required notice within the appropriate warranty period, correction of any such non-compliance, malfunction or failure shall be the obligation of Lessee at Lessee's sole cost and expense. Lessor also warrants, that unless otherwise specified in writing, Lessor is unaware of (i) any recorded Notices of Default affecting the Premise; (ii) any delinquent amounts due under any loan secured by the Premises; and (iii) any bankruptcy proceeding affecting the Premises.

2.3 **Compliance.** Lessor warrants that to the best of its knowledge the improvements on the Premises comply with the building codes, applicable laws, covenants or restrictions of record, regulations, and ordinances (**"Applicable Requirements"**) that were in effect at the time that each improvement, or portion thereof, was constructed. Said warranty does not apply to the use to which Lessee will put the Premises, modifications which may be required by the Americans with Disabilities Act or any similar laws as a result of Lessee's use (see Paragraph 50), or to any Alterations or Utility Installations (as defined in Paragraph 7.3(a)) made or to be made by Lessee. **NOTE: Lessee is responsible for determining whether or not the Applicable Requirements, and especially the zoning, are appropriate for Lessee's intended use, and acknowledges that past uses of the Premises may no longer be allowed**. If the Premises do not comply with said warranty, Lessor shall, except as otherwise provided, promptly after receipt of written notice from Lessee setting forth with specificity the nature and extent of such non-compliance, rectify the same at Lessor's expense. If Lessee does not give Lessor written notice of a non-compliance with this warranty within 6 months following the Start Date, correction of that non-compliance shall be the obligation of Lessee at Lessee's sole cost and expense. If the Applicable Requirements are hereafter changed so as to require during the term of this Lease the construction of an addition to or an alteration of the Premises and/or Building, the remediation of any Hazardous Substance, or the reinforcement or other physical modification of the Unit, Premises and/or Building (**"Capital Expenditure"**), Lessor and Lessee shall allocate the cost of such work as follows:

(a) Subject to Paragraph 2.3(c) below, if such Capital Expenditures are required as a result of the specific and unique use of the Premises by Lessee as compared with uses by tenants in general, Lessee shall be fully responsible for the cost thereof, provided, however that if such Capital Expenditure is required during the last 2 years of this Lease and the cost thereof exceeds 6 months' Base Rent, Lessee may instead terminate this Lease unless Lessor notifies Lessee, in writing, within 10 days after receipt of Lessee's termination notice that Lessor has elected to pay the difference between the actual cost thereof and an amount equal to 6 months' Base Rent. If Lessee elects termination, Lessee shall immediately cease the use of the Premises which requires such Capital Expenditure and deliver to Lessor written notice specifying a termination date at least 90 days thereafter. Such termination date shall, however, in no event be earlier than the last day that Lessee could legally utilize the Premises without commencing such Capital Expenditure.

(b) If such Capital Expenditure is not the result of the specific and unique use of the Premises by Lessee (such as, governmentally mandated seismic modifications), then Lessor shall pay for such Capital Expenditure and Lessee shall only be obligated to pay, each month during the remainder of the term of this Lease or any extension thereof, on the date that on which the Base Rent is due, an amount equal to 1/144th of the portion of such costs reasonably attributable to the Premises. Lessee shall pay Interest on the balance but may prepay its obligation at any time. If, however, such Capital Expenditure is required during the last 2 years of this Lease or if Lessor reasonably determines that it is not economically feasible to pay its share thereof, Lessor shall have the option to terminate this Lease upon 90 days prior written notice to Lessee unless Lessee notifies Lessor, in writing, within 10 days after receipt of Lessor's termination notice that Lessee will pay for such Capital Expenditure. If Lessor does not elect to terminate, and fails to tender its share of any such Capital Expenditure, Lessee may advance such funds and deduct same, with Interest, from Rent until Lessor's share of such costs have been fully paid. If Lessee is unable to finance Lessor's share, or if the balance of the Rent due and payable for the remainder of this Lease is not sufficient to fully reimburse Lessee on an offset basis, Lessee shall have the right to terminate this Lease upon 30 days written notice to Lessor.

(c) Notwithstanding the above, the provisions concerning Capital Expenditures are intended to apply only to non-voluntary, unexpected, and new Applicable Requirements. If the Capital Expenditures are instead triggered by Lessee as a result of an actual or proposed change in use, change in intensity of use, or modification to the Premises then, and in that event, Lessee shall either: (i) immediately cease such changed use or intensity of use and/or take such other steps as may be necessary to eliminate the requirement for such Capital Expenditure, or (ii) complete such Capital Expenditure at its own expense. Lessee shall not, however, have any right to terminate this Lease.

2.4 **Acknowledgements.** Lessee acknowledges that: (a) it has been given an opportunity to inspect and measure the Premises, (b) it has been advised by Lessor and/or Brokers to satisfy itself with respect to the size and condition of the Premises (including but not limited to the electrical, HVAC and fire sprinkler systems, security, environmental aspects, and compliance with Applicable Requirements and the Americans with Disabilities Act), and their suitability for Lessee's intended use, (c) Lessee has made such investigation as it deems necessary with reference to such matters and assumes all responsibility therefor as the same relate to its occupancy of the Premises, (d) it is not relying on any representation as to the size of the Premises made by Brokers or Lessor, (e) the square footage of the Premises was not material to Lessee's decision to lease the Premises and pay the Rent stated herein, and (f) neither Lessor, Lessor's agents, nor Brokers have made any oral or written representations or warranties with respect to said matters other than as set forth in this Lease. In addition, Lessor acknowledges that: (i) Brokers have made no representations, promises or warranties concerning Lessee's ability to honor the Lease or suitability to occupy the Premises, and (ii) it is Lessor's sole responsibility to

INITIALS **INITIALS**

investigate the financial capability and/or suitability of all proposed tenants.

2.5 **Lessee as Prior Owner/Occupant.** The warranties made by Lessor in Paragraph 2 shall be of no force or effect if immediately prior to the Start Date Lessee was the owner or occupant of the Premises. In such event, Lessee shall be responsible for any necessary corrective work.

3. **Term.**

3.1 **Term.** The Commencement Date, Expiration Date and Original Term of this Lease are as specified in Paragraph 1.3.

3.2 **Early Possession.** Any provision herein granting Lessee Early Possession of the Premises is subject to and conditioned upon the Premises being available for such possession prior to the Commencement Date. Any grant of Early Possession only conveys a non-exclusive right to occupy the Premises. If Lessee totally or partially occupies the Premises prior to the Commencement Date, the obligation to pay Base Rent shall be abated for the period of such Early Possession. All other terms of this Lease (including but not limited to the obligations to pay Real Property Taxes and insurance premiums and to maintain the Premises) shall be in effect during such period. Any such Early Possession shall not affect the Expiration Date.

3.3 **Delay In Possession.** Lessor agrees to use its best commercially reasonable efforts to deliver possession of the Premises to Lessee by the Commencement Date. If, despite said efforts, Lessor is unable to deliver possession by such date, Lessor shall not be subject to any liability therefor, nor shall such failure affect the validity of this Lease or change the Expiration Date. Lessee shall not, however, be obligated to pay Rent or perform its other obligations until Lessor delivers possession of the Premises and any period of rent abatement that Lessee would otherwise have enjoyed shall run from the date of delivery of possession and continue for a period equal to what Lessee would otherwise have enjoyed under the terms hereof, but minus any days of delay caused by the acts or omissions of Lessee. If possession is not delivered within 60 days after the Commencement Date, as the same may be extended under the terms of any Work Letter executed by Parties, Lessee may, at its option, by notice in writing within 10 days after the end of such 60 day period, cancel this Lease, in which event the Parties shall be discharged from all obligations hereunder. If such written notice is not received by Lessor within said 10 day period, Lessee's right to cancel shall terminate. If possession of the Premises is not delivered within 120 days after the Commencement Date, this Lease shall terminate unless other agreements are reached between Lessor and Lessee, in writing.

3.4 **Lessee Compliance.** Lessor shall not be required to deliver possession of the Premises to Lessee until Lessee complies with its obligation to provide evidence of insurance (Paragraph 8.5). Pending delivery of such evidence, Lessee shall be required to perform all of its obligations under this Lease from and after the Start Date, including the payment of Rent, notwithstanding Lessor's election to withhold possession pending receipt of such evidence of insurance. Further, if Lessee is required to perform any other conditions prior to or concurrent with the Start Date, the Start Date shall occur but Lessor may elect to withhold possession until such conditions are satisfied.

4. **Rent.**

4.1. **Rent Defined.** All monetary obligations of Lessee to Lessor under the terms of this Lease (except for the Security Deposit) are deemed to be rent (**"Rent"**).

4.2 **Payment.** Lessee shall cause payment of Rent to be received by Lessor in lawful money of the United States, without offset or deduction (except as specifically permitted in this Lease), on or before the day on which it is due. All monetary amounts shall be rounded to the nearest whole dollar. In the event that any invoice prepared by Lessor is inaccurate such inaccuracy shall not constitute a waiver and Lessee shall be obligated to pay the amount set forth in this Lease. Rent for any period during the term hereof which is for less than one full calendar month shall be prorated based upon the actual number of days of said month. Payment of Rent shall be made to Lessor at its address stated herein or to such other persons or place as Lessor may from time to time designate in writing. Acceptance of a payment which is less than the amount then due shall not be a waiver of Lessor's rights to the balance of such Rent, regardless of Lessor's endorsement of any check so stating. In the event that any check, draft, or other instrument of payment given by Lessee to Lessor is dishonored for any reason, Lessee agrees to pay to Lessor the sum of $25 in addition to any Late Charge and Lessor, at its option, may require all future Rent be paid by cashier's check. Payments will be applied first to accrued late charges and attorney's fees, second to accrued interest, then to Base Rent, Insurance and Real Property Taxes, and any remaining amount to any other outstanding charges or costs.

4.3 **Association Fees.** In addition to the Base Rent, Lessee shall pay to Lessor each month an amount equal to any owner's association or condominium fees levied or assessed against the Premises. Said monies shall be paid at the same time and in the same manner as the Base Rent.

5. **Security Deposit.** Lessee shall deposit with Lessor upon execution hereof the Security Deposit as security for Lessee's faithful performance of its obligations under this Lease. If Lessee fails to pay Rent, or otherwise Defaults under this Lease, Lessor may use, apply or retain all or any portion of said Security Deposit for the payment of any amount already due Lessor, for Rents which will be due in the future, and/ or to reimburse or compensate Lessor for any liability, expense, loss or damage which Lessor may suffer or incur by reason thereof. If Lessor uses or applies all or any portion of the Security Deposit, Lessee shall within 10 days after written request therefor deposit monies with Lessor sufficient to restore said Security Deposit to the full amount required by this Lease. If the Base Rent increases during the term of this Lease, Lessee shall, upon written request from Lessor, deposit additional monies with Lessor so that the total amount of the Security Deposit shall at all times bear the same proportion to the increased Base Rent as the initial Security Deposit bore to the initial Base Rent. Should the Agreed Use be amended to accommodate a material change in the business of Lessee or to accommodate a sublessee or assignee, Lessor shall have the right to increase the Security Deposit to the extent necessary, in Lessor's reasonable judgment, to account for any increased wear and tear that the Premises may suffer as a result thereof. If a change in control of Lessee occurs during this Lease and following such change the financial condition of Lessee is, in Lessor's reasonable judgment, significantly reduced, Lessee shall deposit such additional monies with Lessor as shall be sufficient to cause the Security Deposit to be at a commercially reasonable level based on such change in financial condition. Lessor shall not be required to keep the Security Deposit separate from its general accounts. Within 90 days after the expiration or termination of this Lease, Lessor shall return that portion of the Security Deposit not used or applied by Lessor. No part of the Security Deposit shall be considered to be held in trust, to bear interest or to be prepayment for any monies to be paid by Lessee under this Lease.

6. **Use.**

6.1 **Use.** Lessee shall use and occupy the Premises only for the Agreed Use, or any other legal use which is reasonably comparable thereto, and for no other purpose. Lessee shall not use or permit the use of the Premises in a manner that is unlawful, creates damage, waste or a nuisance, or that disturbs occupants of or causes damage to neighboring premises or properties. Other than guide, signal and seeing eye dogs, Lessee

shall not keep or allow in the Premises any pets, animals, birds, fish, or reptiles. Lessor shall not unreasonably withhold or delay its consent to any written request for a modification of the Agreed Use, so long as the same will not impair the structural integrity of the improvements on the Premises or the mechanical or electrical systems therein, and/or is not significantly more burdensome to the Premises. If Lessor elects to withhold consent, Lessor shall within 7 days after such request give written notification of same, which notice shall include an explanation of Lessor's objections to the change in the Agreed Use.

6.2 **Hazardous Substances.**

(a) **Reportable Uses Require Consent.** The term **"Hazardous Substance"** as used in this Lease shall mean any product, substance, or waste whose presence, use, manufacture, disposal, transportation, or release, either by itself or in combination with other materials expected to be on the Premises, is either: (i) potentially injurious to the public health, safety or welfare, the environment or the Premises, (ii) regulated or monitored by any governmental authority, or (iii) a basis for potential liability of Lessor to any governmental agency or third party under any applicable statute or common law theory. Hazardous Substances shall include, but not be limited to, hydrocarbons, petroleum, gasoline, and/or crude oil or any products, by-products or fractions thereof. Lessee shall not engage in any activity in or on the Premises which constitutes a Reportable Use of Hazardous Substances without the express prior written consent of Lessor and timely compliance (at Lessee's expense) with all Applicable Requirements. **"Reportable Use"** shall mean (i) the installation or use of any above or below ground storage tank, (ii) the generation, possession, storage, use, transportation, or disposal of a Hazardous Substance that requires a permit from, or with respect to which a report, notice, registration or business plan is required to be filed with, any governmental authority, and/or (iii) the presence at the Premises of a Hazardous Substance with respect to which any Applicable Requirements requires that a notice be given to persons entering or occupying the Premises or neighboring properties. Notwithstanding the foregoing, Lessee may use any ordinary and customary materials reasonably required to be used in the normal course of the Agreed Use, ordinary office supplies (copier toner, liquid paper, glue, etc.) and common household cleaning materials, so long as such use is in compliance with all Applicable Requirements, is not a Reportable Use, and does not expose the Premises or neighboring property to any meaningful risk of contamination or damage or expose Lessor to any liability therefor. In addition, Lessor may condition its consent to any Reportable Use upon receiving such additional assurances as Lessor reasonably deems necessary to protect itself, the public, the Premises and/or the environment against damage, contamination, injury and/or liability, including, but not limited to, the installation (and removal on or before Lease expiration or termination) of protective modifications (such as concrete encasements) and/or increasing the Security Deposit.

(b) **Duty to Inform Lessor.** If Lessee knows, or has reasonable cause to believe, that a Hazardous Substance has come to be located in, on, under or about the Premises, other than as previously consented to by Lessor, Lessee shall immediately give written notice of such fact to Lessor, and provide Lessor with a copy of any report, notice, claim or other documentation which it has concerning the presence of such Hazardous Substance.

(c) **Lessee Remediation.** Lessee shall not cause or permit any Hazardous Substance to be spilled or released in, on, under, or about the Premises (including through the plumbing or sanitary sewer system) and shall promptly, at Lessee's expense, comply with all Applicable Requirements and take all investigatory and/or remedial action reasonably recommended, whether or not formally ordered or required, for the cleanup of any contamination of, and for the maintenance, security and/or monitoring of the Premises or neighboring properties, that was caused or materially contributed to by Lessee, or pertaining to or involving any Hazardous Substance brought onto the Premises during the term of this Lease, by or for Lessee, or any third party.

(d) **Lessee Indemnification.** Lessee shall indemnify, defend and hold Lessor, its agents, employees, lenders and ground lessor, if any, harmless from and against any and all loss of rents and/or damages, liabilities, judgments, claims, expenses, penalties, and attorneys' and consultants' fees arising out of or involving any Hazardous Substance brought onto the Premises by or for Lessee, or any third party (provided, however, that Lessee shall have no liability under this Lease with respect to underground migration of any Hazardous Substance under the Premises from adjacent properties not caused or contributed to by Lessee). Lessee's obligations shall include, but not be limited to, the effects of any contamination or injury to person, property or the environment created or suffered by Lessee, and the cost of investigation, removal, remediation, restoration and/or abatement, and shall survive the expiration or termination of this Lease. **No termination, cancellation or release agreement entered into by Lessor and Lessee shall release Lessee from its obligations under this Lease with respect to Hazardous Substances, unless specifically so agreed by Lessor in writing at the time of such agreement**.

(e) **Lessor Indemnification.** Except as otherwise provided in paragraph 8.7, Lessor and its successors and assigns shall indemnify, defend, reimburse and hold Lessee, its employees and lenders, harmless from and against any and all environmental damages, including the cost of remediation, which result from Hazardous Substances which existed on the Premises prior to Lessee's occupancy or which are caused by the gross negligence or willful misconduct of Lessor, its agents or employees. Lessor's obligations, as and when required by the Applicable Requirements, shall include, but not be limited to, the cost of investigation, removal, remediation, restoration and/or abatement, and shall survive the expiration or termination of this Lease.

(f) **Investigations and Remediations.** Lessor shall retain the responsibility and pay for any investigations or remediation measures required by governmental entities having jurisdiction with respect to the existence of Hazardous Substances on the Premises prior to Lessee's occupancy, unless such remediation measure is required as a result of Lessee's use (including "Alterations", as defined in paragraph 7.3(a) below) of the Premises, in which event Lessee shall be responsible for such payment. Lessee shall cooperate fully in any such activities at the request of Lessor, including allowing Lessor and Lessor's agents to have reasonable access to the Premises at reasonable times in order to carry out Lessor's investigative and remedial responsibilities.

(g) **Lessor Termination Option.** If a Hazardous Substance Condition (see Paragraph 9.1(e)) occurs during the term of this Lease, unless Lessee is legally responsible therefor (in which case Lessee shall make the investigation and remediation thereof required by the Applicable Requirements and this Lease shall continue in full force and effect, but subject to Lessor's rights under Paragraph 6.2(d) and Paragraph 13), Lessor may, at Lessor's option, either (i) investigate and remediate such Hazardous Substance Condition, if required, as soon as reasonably possible at Lessor's expense, in which event this Lease shall continue in full force and effect, or (ii) if the estimated cost to remediate such condition exceeds 12 times the then monthly Base Rent or $100,000, whichever is greater, give written notice to Lessee, within 30 days after receipt by Lessor of knowledge of the occurrence of such Hazardous Substance Condition, of Lessor's desire to terminate this Lease as of the date 60 days following the date of such notice. In the event Lessor elects to give a termination notice, Lessee may, within 10 days thereafter, give written notice to Lessor of Lessee's commitment to pay the amount by which the cost of the remediation of such Hazardous Substance Condition exceeds an amount equal to 12 times the then monthly Base Rent or $100,000, whichever is greater. Lessee shall provide Lessor with said funds or satisfactory assurance thereof within 30

days following such commitment. In such event, this Lease shall continue in full force and effect, and Lessor shall proceed to make such remediation as soon as reasonably possible after the required funds are available. If Lessee does not give such notice and provide the required funds or assurance thereof within the time provided, this Lease shall terminate as of the date specified in Lessor's notice of termination.

6.3 **Lessee's Compliance with Applicable Requirements.** Except as otherwise provided in this Lease, Lessee shall, at Lessee's sole expense, fully, diligently and in a timely manner, materially comply with all Applicable Requirements, the requirements of any applicable fire insurance underwriter or rating bureau, and the recommendations of Lessor's engineers and/or consultants which relate in any manner to the such Requirements, without regard to whether such Requirements are now in effect or become effective after the Start Date. Lessee shall, within 10 days after receipt of Lessor's written request, provide Lessor with copies of all permits and other documents, and other information evidencing Lessee's compliance with any Applicable Requirements specified by Lessor, and shall immediately upon receipt, notify Lessor in writing (with copies of any documents involved) of any threatened or actual claim, notice, citation, warning, complaint or report pertaining to or involving the failure of Lessee or the Premises to comply with any Applicable Requirements. Likewise, Lessee shall immediately give written notice to Lessor of: (i) any water damage to the Premises and any suspected seepage, pooling, dampness or other condition conducive to the production of mold; or (ii) any mustiness or other odors that might indicate the presence of mold in the Premises. In addition, Lessee shall provide copies of all relevant material safety data sheets (MSDS) to Lessor within 10 days of the receipt of a written request therefor. In addition, Lessee shall provide Lessor with copies of its business license, certificate of occupancy and/or any similar document within 10 days of the receipt of a written request therefor.

6.4 **Inspection; Compliance.** Lessor and Lessor's **"Lender"** (as defined in Paragraph 30) and consultants shall have the right to enter into Premises at any time, in the case of an emergency, and otherwise at reasonable times after reasonable notice, for the purpose of inspecting the condition of the Premises and for verifying compliance by Lessee with this Lease. The cost of any such inspections shall be paid by Lessor, unless a violation of Applicable Requirements, or a Hazardous Substance Condition (see paragraph 9.1) is found to exist or be imminent, or the inspection is requested or ordered by a governmental authority. In such case, Lessee shall upon request reimburse Lessor for the cost of such inspection, so long as such inspection is reasonably related to the violation or contamination. In addition, Lessee shall provide copies of all relevant material safety data sheets (**MSDS**) to Lessor within 10 days of the receipt of a written request therefor.

7. **Maintenance; Repairs, Utility Installations; Trade Fixtures and Alterations.**

7.1 **Lessee's Obligations.**

(a) **In General.** Subject to the provisions of Paragraph 2.2 (Condition), 2.3 (Compliance), 6.3 (Lessee's Compliance with Applicable Requirements), 7.2 (Lessor's Obligations), 9 (Damage or Destruction), and 14 (Condemnation), Lessee shall, at Lessee's sole expense, keep the Premises, Utility Installations (intended for Lessee's exclusive use, no matter where located), and Alterations in good order, condition and repair (whether or not the portion of the Premises requiring repairs, or the means of repairing the same, are reasonably or readily accessible to Lessee, and whether or not the need for such repairs occurs as a result of Lessee's use, any prior use, the elements or the age of such portion of the Premises), including, but not limited to, all equipment or facilities, such as plumbing, HVAC equipment, electrical, lighting facilities, boilers, pressure vessels, fire protection system, fixtures, walls (interior and exterior), foundations, ceilings, roofs, roof drainage systems, floors, windows, doors, plate glass, skylights, landscaping, driveways, parking lots, fences, retaining walls, signs, sidewalks and parkways located in, on, or adjacent to the Premises. Lessee, in keeping the Premises in good order, condition and repair, shall exercise and perform good maintenance practices, specifically including the procurement and maintenance of the service contracts required by Paragraph 7.1(b) below. Lessee's obligations shall include restorations, replacements or renewals when necessary to keep the Premises and all improvements thereon or a part thereof in good order, condition and state of repair. Lessee shall, during the term of this Lease, keep the exterior appearance of the Building in a first-class condition (including, e.g. graffiti removal) consistent with the exterior appearance of other similar facilities of comparable age and size in the vicinity, including, when necessary, the exterior repainting of the Building.

(b) **Service Contracts.** Lessee shall, at Lessee's sole expense, procure and maintain contracts, with copies to Lessor, in customary form and substance for, and with contractors specializing and experienced in the maintenance of the following equipment and improvements, if any, if and when installed on the Premises: (i) HVAC equipment, ~~(ii) boiler, and pressure vessels,~~ (iii) fire extinguishing systems, including fire alarm and/or smoke detection, (iv) landscaping and irrigation systems, (v) roof covering and drains, ~~and (vi) clarifiers~~. However, Lessor reserves the right, upon notice to Lessee, to procure and maintain any or all of such service contracts, and Lessee shall reimburse Lessor, upon demand, for the cost thereof.

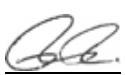
(c) **Failure to Perform.** If Lessee fails to perform Lessee's obligations under this Paragraph 7.1, Lessor may enter upon the Premises after 10 days' prior written notice to Lessee (except in the case of an emergency, in which case no notice shall be required), perform such obligations on Lessee's behalf, and put the Premises in good order, condition and repair, and Lessee shall promptly pay to Lessor a sum equal to 115% of the cost thereof.

(d) **Replacement.** Subject to Lessee's indemnification of Lessor as set forth in Paragraph 8.7 below, and without relieving Lessee of liability resulting from Lessee's failure to exercise and perform good maintenance practices, if an item described in Paragraph 7.1(b), including the roof, cannot be repaired other than at a cost which is in excess of ~~50~~ 25% of the cost of replacing such item, then such item shall be replaced by Lessor, and the cost thereof shall be prorated between the Parties and Lessee shall only be obligated to pay, each month during the remainder of the term of this Lease, on the date on which Base Rent is due, an amount equal to the product of multiplying the cost of such replacement by a fraction, the numerator of which is one, and the denominator of which is 144 (ie. 1/144th of the cost per month). Lessee shall pay Interest on the unamortized balance but may prepay its obligation at any time.

7.2 **Lessor's Obligations.** Subject to the provisions of Paragraphs 2.2 (Condition), 2.3 (Compliance), 9 (Damage or Destruction) and 14 (Condemnation), it is intended by the Parties hereto that Lessor have no obligation, in any manner whatsoever, to repair and maintain the Premises, or the equipment therein, all of which obligations are intended to be that of the Lessee. It is the intention of the Parties that the terms of this Lease govern the respective obligations of the Parties as to maintenance and repair of the Premises, and they expressly waive the benefit of any statute now or hereafter in effect to the extent it is inconsistent with the terms of this Lease.

7.3 **Utility Installations; Trade Fixtures; Alterations.**

(a) **Definitions.** The term "Utility Installations" refers to all floor and window coverings, air and/or vacuum lines, power panels, electrical distribution, security and fire protection systems, communication cabling, lighting fixtures, HVAC equipment, plumbing, and fencing in or on the Premises. The term **"Trade Fixtures"** shall mean Lessee's machinery and equipment that can be removed without doing material damage to the Premises. The term **"Alterations"** shall mean any modification of the improvements, other than Utility Installations or Trade Fixtures, whether by



addition or deletion. **"Lessee Owned Alterations and/or Utility Installations"** are defined as Alterations and/or Utility Installations made by Lessee that are not yet owned by Lessor pursuant to Paragraph 7.4(a).

(b) **Consent.** Lessee shall not make any Alterations or Utility Installations to the Premises without Lessor's prior written consent. Lessee may, however, make non-structural Alterations or Utility Installations to the interior of the Premises (excluding the roof) without such consent but upon notice to Lessor, as long as they are not visible from the outside, do not involve puncturing, relocating or removing the roof or any existing walls, will not affect the electrical, plumbing, HVAC, and/or life safety systems, and the cumulative cost thereof during this Lease as extended does not exceed a sum equal to 3 month's Base Rent in the aggregate or a sum equal to one month's Base Rent in any one year. Notwithstanding the foregoing, Lessee shall not make or permit any roof penetrations and/or install anything on the roof without the prior written approval of Lessor. Lessor may, as a precondition to granting such approval, require Lessee to utilize a contractor chosen and/or approved by Lessor. Any Alterations or Utility Installations that Lessee shall desire to make and which require the consent of the Lessor shall be presented to Lessor in written form with detailed plans. Consent shall be deemed conditioned upon Lessee's: (i) acquiring all applicable governmental permits, (ii) furnishing Lessor with copies of both the permits and the plans and specifications prior to commencement of the work, and (iii) compliance with all conditions of said permits and other Applicable Requirements in a prompt and expeditious manner. Any Alterations or Utility Installations shall be performed in a workmanlike manner with good and sufficient materials. Lessee shall promptly upon completion furnish Lessor with as-built plans and specifications. For work which costs an amount in excess of one month's Base Rent, Lessor may condition its consent upon Lessee providing a lien and completion bond in an amount equal to 150% of the estimated cost of such Alteration or Utility Installation and/or upon Lessee's posting an additional Security Deposit with Lessor.

(c) **Liens; Bonds.** Lessee shall pay, when due, all claims for labor or materials furnished or alleged to have been furnished to or for Lessee at or for use on the Premises, which claims are or may be secured by any mechanic's or materialmen's lien against the Premises or any interest therein. Lessee shall give Lessor not less than 10 days notice prior to the commencement of any work in, on or about the Premises, and Lessor shall have the right to post notices of non-responsibility. If Lessee shall contest the validity of any such lien, claim or demand, then Lessee shall, at its sole expense defend and protect itself, Lessor and the Premises against the same and shall pay and satisfy any such adverse judgment that may be rendered thereon before the enforcement thereof. If Lessor shall require, Lessee shall furnish a surety bond in an amount equal to 150% of the amount of such contested lien, claim or demand, indemnifying Lessor against liability for the same. If Lessor elects to participate in any such action, Lessee shall pay Lessor's attorneys' fees and costs. Lessee shall not be responsible for claims and payments related to liens or bonds for labors or materials that are not furnished to Lessee.

7.4 **Ownership; Removal; Surrender; and Restoration.**

(a) **Ownership.** Subject to Lessor's right to require removal or elect ownership as hereinafter provided, all Alterations and Utility Installations made by Lessee shall be the property of Lessee, but considered a part of the Premises. Lessor may, at any time, elect in writing to be the owner of all or any specified part of the Lessee Owned Alterations and Utility Installations. Unless otherwise instructed per paragraph 7.4(b) hereof, all Lessee Owned Alterations and Utility Installations shall, at the expiration or termination of this Lease, become the property of Lessor and be surrendered by Lessee with the Premises.

(b) **Removal.** By delivery to Lessee of written notice from Lessor not earlier than 90 and not later than 30 days prior to the end of the term of this Lease, Lessor may require that any or all Lessee Owned Alterations or Utility Installations be removed by the expiration or termination of this Lease. Lessor may require the removal at any time of all or any part of any Lessee Owned Alterations or Utility Installations made without the required consent.

(c) **Surrender; Restoration.** Lessee shall surrender the Premises by the Expiration Date or any earlier termination date, with all of the improvements, parts and surfaces thereof broom clean and free of debris, and in good operating order, condition and state of repair, ordinary wear and tear excepted. "Ordinary wear and tear" shall not include any damage or deterioration that would have been prevented by good maintenance practice. Notwithstanding the foregoing, if this Lease is for 12 months or less, then Lessee shall surrender the Premises in the same condition as delivered to Lessee on the Start Date with NO allowance for ordinary wear and tear. Lessee shall repair any damage occasioned by the installation, maintenance or removal of Trade Fixtures, Lessee owned Alterations and/or Utility Installations, furnishings, and equipment as well as the removal of any storage tank installed by or for Lessee. Lessee shall remove from the Premises any and all Hazardous Substances brought onto the Premises by or for Lessee, or any third party (except Hazardous Substances which were deposited via underground migration from areas outside of the Premises) to the level specified in Applicable Requirements. Trade Fixtures shall remain the property of Lessee and shall be removed by Lessee. Any personal property of Lessee not removed on or before the Expiration Date or any earlier termination date shall be deemed to have been abandoned by Lessee and may be disposed of or retained by Lessor as Lessor may desire. The failure by Lessee to timely vacate the Premises pursuant to this Paragraph 7.4(c) without the express written consent of Lessor shall constitute a holdover under the provisions of Paragraph 26 below.

8. **Insurance; Indemnity.**

8.1 **Payment For Insurance.** Lessee shall pay for all insurance required under Paragraph 8 except to the extent of the cost attributable to liability insurance carried by Lessor under Paragraph 8.2(b) in excess of $2,000,000 per occurrence. Premiums for policy periods commencing prior to or extending beyond the Lease term shall be prorated to correspond to the Lease term. Payment shall be made by Lessee to Lessor within 10 days following receipt of an invoice.

8.2 **Liability Insurance.**

(a) **Carried by Lessee.** Lessee shall obtain and keep in force a Commercial General Liability policy of insurance protecting Lessee and Lessor as an additional insured against claims for bodily injury, personal injury and property damage based upon or arising out of the ownership, use, occupancy or maintenance of the Premises and all areas appurtenant thereto. Such insurance shall be on an occurrence basis providing single limit coverage in an amount not less than $1,000,000 per occurrence with an annual aggregate of not less than $2,000,000. Lessee shall add Lessor as an additional insured by means of an endorsement at least as broad as the Insurance Service Organization's "Additional Insured-Managers or Lessors of Premises" Endorsement. The policy shall not contain any intra-insured exclusions as between insured persons or organizations, but shall include coverage for liability assumed under this Lease as an **"insured contract"** for the performance of Lessee's indemnity obligations under this Lease. The limits of said insurance shall not, however, limit the liability of Lessee nor relieve Lessee of any obligation hereunder. Lessee shall provide an endorsement on its liability policy(ies) which provides that its insurance shall be primary to and not contributory with any similar insurance carried by Lessor, whose insurance shall be considered excess insurance only.

(b) **Carried by Lessor.** Lessor shall maintain liability insurance as described in Paragraph 8.2(a), in addition to, and not in lieu of, the insurance required to be maintained by Lessee. Lessee shall not be named as an additional insured therein.

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8.3 **Property Insurance - Building, Improvements and Rental Value.**

(a) **Building and Improvements.** The Insuring Party shall obtain and keep in force a policy or policies in the name of Lessor, with loss payable to Lessor, any ground-lessor, and to any Lender insuring loss or damage to the Premises. The amount of such insurance shall be equal to the full insurable replacement cost of the Premises, as the same shall exist from time to time, or the amount required by any Lender, but in no event more than the commercially reasonable and available insurable value thereof. Lessee Owned Alterations and Utility Installations, Trade Fixtures, and Lessee's personal property shall be insured by Lessee not by Lessor. If the coverage is available and commercially appropriate, such policy or policies shall insure against all risks of direct physical loss or damage (except the perils of flood and/or earthquake unless required by a Lender), including coverage for debris removal and the enforcement of any Applicable Requirements requiring the upgrading, demolition, reconstruction or replacement of any portion of the Premises as the result of a covered loss. Said policy or policies shall also contain an agreed valuation provision in lieu of any coinsurance clause, waiver of subrogation, and inflation guard protection causing an increase in the annual property insurance coverage amount by a factor of not less than the adjusted U.S. Department of Labor Consumer Price Index for All Urban Consumers for the city nearest to where the Premises are located. If such insurance coverage has a deductible clause, the deductible amount shall not exceed $5,000 per occurrence, and Lessee shall be liable for such deductible amount in the event of an Insured Loss.

(b) **Rental Value.** The Insuring Party shall obtain and keep in force a policy or policies in the name of Lessor with loss payable to Lessor and any Lender, insuring the loss of the full Rent for one year with an extended period of indemnity for an additional 180 days ("Rental Value insurance"). Said insurance shall contain an agreed valuation provision in lieu of any coinsurance clause, and the amount of coverage shall be adjusted annually to reflect the projected Rent otherwise payable by Lessee, for the next 12 month period. Lessee shall be liable for any deductible amount in the event of such loss.

(c) **Adjacent Premises.** If the Premises are part of a larger building, or of a group of buildings owned by Lessor which are adjacent to the Premises, the Lessee shall pay for any increase in the premiums for the property insurance of such building or buildings if said increase is caused by Lessee's acts, omissions, use or occupancy of the Premises.

8.4 **Lessee's Property; Business Interruption Insurance; Worker's Compensation Insurance.**

(a) **Property Damage.** Lessee shall obtain and maintain insurance coverage on all of Lessee's personal property, Trade Fixtures, and Lessee Owned Alterations and Utility Installations. Such insurance shall be full replacement cost coverage with a deductible of not to exceed $1,000 per occurrence. The proceeds from any such insurance shall be used by Lessee for the replacement of personal property, Trade Fixtures and Lessee Owned Alterations and Utility Installations.

(b) **Business Interruption.** Lessee shall obtain and maintain loss of income and extra expense insurance in amounts as will reimburse Lessee for direct or indirect loss of earnings attributable to all perils commonly insured against by prudent lessees in the business of Lessee or attributable to prevention of access to the Premises as a result of such perils.

(c) **Worker's Compensation Insurance.** Lessee shall obtain and maintain Worker's Compensation Insurance in such amount as may be required by Applicable Requirements. Such policy shall include a 'Waiver of Subrogation' endorsement. Lessee shall provide Lessor with a copy of such endorsement along with the certificate of insurance or copy of the policy required by paragraph 8.5.

(d) **No Representation of Adequate Coverage.** Lessor makes no representation that the limits or forms of coverage of insurance specified herein are adequate to cover Lessee's property, business operations or obligations under this Lease.

8.5 **Insurance Policies.** Insurance required herein shall be by companies maintaining during the policy term a "General Policyholders Rating" of at least A-, VII, as set forth in the most current issue of "Best's Insurance Guide", or such other rating as may be required by a Lender. Lessee shall not do or permit to be done anything which invalidates the required insurance policies. Lessee shall, prior to the Start Date, deliver to Lessor certified copies of policies of such insurance or certificates with copies of the required endorsements evidencing the existence and amounts of the required insurance. No such policy shall be cancelable or subject to modification except after 30 days prior written notice to Lessor. Lessee shall, at least 10 days prior to the expiration of such policies, furnish Lessor with evidence of renewals or "insurance binders" evidencing renewal thereof, or Lessor may order such insurance and charge the cost thereof to Lessee, which amount shall be payable by Lessee to Lessor upon demand. Such policies shall be for a term of at least one year, or the length of the remaining term of this Lease, whichever is less. If either Party shall fail to procure and maintain the insurance required to be carried by it, the other Party may, but shall not be required to, procure and maintain the same.

8.6 **Waiver of Subrogation.** Without affecting any other rights or remedies, Lessee and Lessor each hereby release and relieve the other, and waive their entire right to recover damages against the other, for loss of or damage to its property arising out of or incident to the perils required to be insured against herein. The effect of such releases and waivers is not limited by the amount of insurance carried or required, or by any deductibles applicable hereto. The Parties agree to have their respective property damage insurance carriers waive any right to subrogation that such companies may have against Lessor or Lessee, as the case may be, so long as the insurance is not invalidated thereby.

8.7 **Indemnity.** Except for Lessor's gross negligence or willful misconduct, Lessee shall indemnify, protect, defend and hold harmless the Premises, Lessor and its agents, Lessor's master or ground lessor, partners and Lenders, from and against any and all claims, loss of rents and/or damages, liens, judgments, penalties, attorneys' and consultants' fees, expenses and/or liabilities arising out of, involving, or in connection with, the use and/or occupancy of the Premises by Lessee. If any action or proceeding is brought against Lessor by reason of any of the foregoing matters, Lessee shall upon notice defend the same at Lessee's expense by counsel reasonably satisfactory to Lessor and Lessor shall cooperate with Lessee in such defense. Lessor need not have first paid any such claim in order to be defended or indemnified.

8.8 **Exemption of Lessor and its Agents from Liability.** Notwithstanding the negligence or breach of this Lease by Lessor or its agents, neither Lessor nor its agents shall be liable under any circumstances for: (i) injury or damage to the person or goods, wares, merchandise or other property of Lessee, Lessee's employees, contractors, invitees, customers, or any other person in or about the Premises, whether such damage or injury is caused by or results from fire, steam, electricity, gas, water or rain, indoor air quality, the presence of mold or from the breakage, leakage, obstruction or other defects of pipes, fire sprinklers, wires, appliances, plumbing, HVAC or lighting fixtures, or from any other cause, whether the said injury or damage results from conditions arising upon the Premises or upon other portions of the building of which the Premises are a part, or from other sources or places, (ii) any damages arising from any act or neglect of any other tenant of Lessor or from the failure of Lessor or its agents to enforce the provisions of any other lease in the Project, or (iii) injury to Lessee's business or for any loss of income or profit therefrom. Instead, it is intended that Lessee's sole recourse in the event of such damages or injury be to file a claim on the insurance policy(ies) that Lessee is required to maintain pursuant to the provisions of paragraph 8.

8.9 **Failure to Provide Insurance.** Lessee acknowledges that any failure on its part to obtain or maintain the insurance required herein will expose Lessor to risks and potentially cause Lessor to incur costs not contemplated by this Lease, the extent of which will be extremely

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difficult to ascertain. Accordingly, for any month or portion thereof that Lessee does not maintain the required insurance and/or does not provide Lessor with the required binders or certificates evidencing the existence of the required insurance, the Base Rent shall be automatically increased, without any requirement for notice to Lessee, by an amount equal to 10% of the then existing Base Rent or $100, whichever is greater. The parties agree that such increase in Base Rent represents fair and reasonable compensation for the additional risk/costs that Lessor will incur by reason of Lessee's failure to maintain the required insurance. Such increase in Base Rent shall in no event constitute a waiver of Lessee's Default or Breach with respect to the failure to maintain such insurance, prevent the exercise of any of the other rights and remedies granted hereunder, nor relieve Lessee of its obligation to maintain the insurance specified in this Lease.

9. **Damage or Destruction.**

9.1 **Definitions.**

(a) **"Premises Partial Damage"** shall mean damage or destruction to the improvements on the Premises, other than Lessee Owned Alterations and Utility Installations, which can reasonably be repaired in 6 months or less from the date of the damage or destruction. Lessor shall notify Lessee in writing within 30 days from the date of the damage or destruction as to whether or not the damage is Partial or Total.

(b) **"Premises Total Destruction"** shall mean damage or destruction to the Premises, other than Lessee Owned Alterations and Utility Installations and Trade Fixtures, which cannot reasonably be repaired in 6 months or less from the date of the damage or destruction. Lessor shall notify Lessee in writing within 30 days from the date of the damage or destruction as to whether or not the damage is Partial or Total.

(c) **"Insured Loss"** shall mean damage or destruction to improvements on the Premises, other than Lessee Owned Alterations and Utility Installations and Trade Fixtures, which was caused by an event required to be covered by the insurance described in Paragraph 8.3(a), irrespective of any deductible amounts or coverage limits involved.

(d) **"Replacement Cost"** shall mean the cost to repair or rebuild the improvements owned by Lessor at the time of the occurrence to their condition existing immediately prior thereto, including demolition, debris removal and upgrading required by the operation of Applicable Requirements, and without deduction for depreciation.

(e) **"Hazardous Substance Condition"** shall mean the occurrence or discovery of a condition involving the presence of, or a contamination by, a Hazardous Substance, in, on, or under the Premises which requires remediation.

9.2 **Partial Damage - Insured Loss.** If a Premises Partial Damage that is an Insured Loss occurs, then Lessor shall, at Lessor's expense, repair such damage (but not Lessee's Trade Fixtures or Lessee Owned Alterations and Utility Installations) as soon as reasonably possible and this Lease shall continue in full force and effect; provided, however, that Lessee shall, at Lessor's election, make the repair of any damage or destruction the total cost to repair of which is $10,000 or less, and, in such event, Lessor shall make any applicable insurance proceeds available to Lessee on a reasonable basis for that purpose. Notwithstanding the foregoing, if the required insurance was not in force or the insurance proceeds are not sufficient to effect such repair, the Insuring Party shall promptly contribute the shortage in proceeds (except as to the deductible which is Lessee's responsibility) as and when required to complete said repairs. In the event, however, such shortage was due to the fact that, by reason of the unique nature of the improvements, full replacement cost insurance coverage was not commercially reasonable and available, Lessor shall have no obligation to pay for the shortage in insurance proceeds or to fully restore the unique aspects of the Premises unless Lessee provides Lessor with the funds to cover same, or adequate assurance thereof, within 10 days following receipt of written notice of such shortage and request therefor. If Lessor receives said funds or adequate assurance thereof within said 10 day period, the party responsible for making the repairs shall complete them as soon as reasonably possible and this Lease shall remain in full force and effect. If such funds or assurance are not received, Lessor may nevertheless elect by written notice to Lessee within 10 days thereafter to: (i) make such restoration and repair as is commercially reasonable with Lessor paying any shortage in proceeds, in which case this Lease shall remain in full force and effect, or (ii) have this Lease terminate 30 days thereafter. Lessee shall not be entitled to reimbursement of any funds contributed by Lessee to repair any such damage or destruction. Premises Partial Damage due to flood or earthquake shall be subject to Paragraph 9.3, notwithstanding that there may be some insurance coverage, but the net proceeds of any such insurance shall be made available for the repairs if made by either Party.

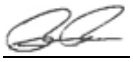
9.3 **Partial Damage - Uninsured Loss.** If a Premises Partial Damage that is not an Insured Loss occurs, unless caused by a negligent or willful act of Lessee (in which event Lessee shall make the repairs at Lessee's expense), Lessor may either: (i) repair such damage as soon as reasonably possible at Lessor's expense, in which event this Lease shall continue in full force and effect, or (ii) terminate this Lease by giving written notice to Lessee within 30 days after receipt by Lessor of knowledge of the occurrence of such damage. Such termination shall be effective 60 days following the date of such notice. In the event Lessor elects to terminate this Lease, Lessee shall have the right within 10 days after receipt of the termination notice to give written notice to Lessor of Lessee's commitment to pay for the repair of such damage without reimbursement from Lessor. Lessee shall provide Lessor with said funds or satisfactory assurance thereof within 30 days after making such commitment. In such event this Lease shall continue in full force and effect, and Lessor shall proceed to make such repairs as soon as reasonably possible after the required funds are available. If Lessee does not make the required commitment, this Lease shall terminate as of the date specified in the termination notice.

9.4 **Total Destruction.** Notwithstanding any other provision hereof, if a Premises Total Destruction occurs, this Lease shall terminate 60 days following such Destruction. If the damage or destruction was caused by the gross negligence or willful misconduct of Lessee, Lessor shall have the right to recover Lessor's damages from Lessee, except as provided in Paragraph 8.6.

9.5 **Damage Near End of Term.** If at any time during the last 6 months of this Lease there is damage for which the cost to repair exceeds one month's Base Rent, whether or not an Insured Loss, Lessor may terminate this Lease effective 60 days following the date of occurrence of such damage by giving a written termination notice to Lessee within 30 days after the date of occurrence of such damage. Notwithstanding the foregoing, if Lessee at that time has an exercisable option to extend this Lease or to purchase the Premises, then Lessee may preserve this Lease by, (a) exercising such option and (b) providing Lessor with any shortage in insurance proceeds (or adequate assurance thereof) needed to make the repairs on or before the earlier of (i) the date which is 10 days after Lessee's receipt of Lessor's written notice purporting to terminate this Lease, or (ii) the day prior to the date upon which such option expires. If Lessee duly exercises such option during such period and provides Lessor with funds (or adequate assurance thereof) to cover any shortage in insurance proceeds, Lessor shall, at Lessor's commercially reasonable expense, repair such damage as soon as reasonably possible and this Lease shall continue in full force and effect. If Lessee fails to exercise such option and provide such funds or assurance during such period, then this Lease shall terminate on the date specified in the termination notice and Lessee's option shall be extinguished.

9.6 **Abatement of Rent; Lessee's Remedies.**

(a) **Abatement.** In the event of Premises Partial Damage or Premises Total Destruction or a Hazardous Substance Condition for



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which Lessee is not responsible under this Lease, the Rent payable by Lessee for the period required for the repair, remediation or restoration of such damage shall be abated in proportion to the degree to which Lessee's use of the Premises is impaired, but not to exceed the proceeds received from the Rental Value insurance. All other obligations of Lessee hereunder shall be performed by Lessee, and Lessor shall have no liability for any such damage, destruction, remediation, repair or restoration except as provided herein.

(b) **Remedies.** If Lessor is obligated to repair or restore the Premises and does not commence, in a substantial and meaningful way, such repair or restoration within 90 days after such obligation shall accrue, Lessee may, at any time prior to the commencement of such repair or restoration, give written notice to Lessor and to any Lenders of which Lessee has actual notice, of Lessee's election to terminate this Lease on a date not less than 60 days following the giving of such notice. If Lessee gives such notice and such repair or restoration is not commenced within 30 days thereafter, this Lease shall terminate as of the date specified in said notice. If the repair or restoration is commenced within such 30 days, this Lease shall continue in full force and effect. "Commence" shall mean either the unconditional authorization of the preparation of the required plans, or the beginning of the actual work on the Premises, whichever first occurs.

9.7 **Termination; Advance Payments.** Upon termination of this Lease pursuant to Paragraph 6.2(g) or Paragraph 9, an equitable adjustment shall be made concerning advance Base Rent and any other advance payments made by Lessee to Lessor. Lessor shall, in addition, return to Lessee so much of Lessee's Security Deposit as has not been, or is not then required to be, used by Lessor.

10. **Real Property Taxes.**

10.1 **Definition.** As used herein, the term **"Real Property Taxes"** shall include any form of assessment; real estate, general, special, ordinary or extraordinary, or rental levy or tax (other than inheritance, personal income or estate taxes); improvement bond; and/or license fee imposed upon or levied against any legal or equitable interest of Lessor in the Premises or the Project, Lessor's right to other income therefrom, and/or Lessor's business of leasing, by any authority having the direct or indirect power to tax and where the funds are generated with reference to the Building address and where the proceeds so generated are to be applied by the city, county or other local taxing authority of a jurisdiction within which the Premises are located. Real Property Taxes shall also include any tax, fee, levy, assessment or charge, or any increase therein: (i) imposed by reason of events occurring during the term of this Lease, including but not limited to, a change in the ownership of the Premises, and (ii) levied or assessed on machinery or equipment provided by Lessor to Lessee pursuant to this Lease.

10.2 **Payment of Taxes.** In addition to Base Rent, Lessee shall pay to Lessor an amount equal to the Real Property Tax installment due at least 20 days prior to the applicable delinquency date. If any such installment shall cover any period of time prior to or after the expiration or termination of this Lease, Lessee's share of such installment shall be prorated. In the event Lessee incurs a late charge on any Rent payment, Lessor may estimate the current Real Property Taxes, and require that such taxes be paid in advance to Lessor by Lessee monthly in advance with the payment of the Base Rent. Such monthly payments shall be an amount equal to the amount of the estimated installment of taxes divided by the number of months remaining before the month in which said installment becomes delinquent. When the actual amount of the applicable tax bill is known, the amount of such equal monthly advance payments shall be adjusted as required to provide the funds needed to pay the applicable taxes. If the amount collected by Lessor is insufficient to pay such Real Property Taxes when due, Lessee shall pay Lessor, upon demand, such additional sum as is necessary. Advance payments may be intermingled with other moneys of Lessor and shall not bear interest. In the event of a Breach by Lessee in the performance of its obligations under this Lease, then any such advance payments may be treated by Lessor as an additional Security Deposit.

10.3 **Joint Assessment.** If the Premises are not separately assessed, Lessee's liability shall be an equitable proportion of the Real Property Taxes for all of the land and improvements included within the tax parcel assessed, such proportion to be conclusively determined by Lessor from the respective valuations assigned in the assessor's work sheets or such other information as may be reasonably available.

10.4 **Personal Property Taxes.** Lessee shall pay, prior to delinquency, all taxes assessed against and levied upon Lessee Owned Alterations, Utility Installations, Trade Fixtures, furnishings, equipment and all personal property of Lessee. When possible, Lessee shall cause its Lessee Owned Alterations and Utility Installations, Trade Fixtures, furnishings, equipment and all other personal property to be assessed and billed separately from the real property of Lessor. If any of Lessee's said property shall be assessed with Lessor's real property, Lessee shall pay Lessor the taxes attributable to Lessee's property within 10 days after receipt of a written statement setting forth the taxes applicable to Lessee's property.

11. **Utilities and Services.** Lessee shall pay for all water, gas, heat, light, power, telephone, trash disposal and other utilities and services supplied to the Premises, together with any taxes thereon. If any such services are not separately metered or billed to Lessee, Lessee shall pay a reasonable proportion, to be determined by Lessor, of all charges jointly metered or billed. There shall be no abatement of rent and Lessor shall not be liable in any respect whatsoever for the inadequacy, stoppage, interruption or discontinuance of any utility or service due to riot, strike, labor dispute, breakdown, accident, repair or other cause beyond Lessor's reasonable control or in cooperation with governmental request or directions.

12. **Assignment and Subletting.**

12.1 **Lessor's Consent Required.**

(a) Lessee shall not voluntarily or by operation of law assign, transfer, mortgage or encumber (collectively, **"assign or assignment"**) or sublet all or any part of Lessee's interest in this Lease or in the Premises without Lessor's prior written consent and such consent shall not be reasonably withheld.

(b) Unless Lessee is a corporation and its stock is publicly traded on a national stock exchange, a change in the control of Lessee that results in a reduction of the net worth of the Lessee by an amount greater than 49% shall constitute an assignment requiring consent. ~~The transfer, on a cumulative basis, of 25% or more of the voting control of Lessee shall constitute a change in control for this purpose~~.

(c) The involvement of Lessee or its assets in any transaction, or series of transactions (by way of merger, sale, acquisition, financing, transfer, leveraged buy-out or otherwise), whether or not a formal assignment or hypothecation of this Lease or Lessee's assets occurs, which results or will result in a reduction of the Net Worth of Lessee by an amount greater than ~~25~~ 49% of such Net Worth as it was represented at the time of the execution of this Lease or at the time of the most recent assignment to which Lessor has consented, or as it exists immediately prior to said transaction or transactions constituting such reduction, whichever was or is greater, shall be considered an assignment of this Lease to which Lessor may withhold its consent. **"Net Worth of Lessee"** shall mean the net worth of Lessee (excluding any guarantors) established under generally accepted accounting principles.

(d) An assignment or subletting without consent shall, at Lessor's option, be a Default curable after notice per Paragraph 13.1(c), or a noncurable Breach without the necessity of any notice and grace period. If Lessor elects to treat such unapproved assignment or subletting as a noncurable Breach, Lessor may either: (i) terminate this Lease, or (ii) upon 30 days written notice, increase the monthly Base Rent to 110% of the Base

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Rent then in effect. Further, in the event of such Breach and rental adjustment, (i) the purchase price of any option to purchase the Premises held by Lessee shall be subject to similar adjustment to 110% of the price previously in effect, and (ii) all fixed and non-fixed rental adjustments scheduled during the remainder of the Lease term shall be increased to 110% of the scheduled adjusted rent.

(e) Lessee's remedy for any breach of Paragraph 12.1 by Lessor shall be limited to compensatory damages and/or injunctive relief.

f) Lessor may reasonably withhold consent to a proposed assignment or subletting if Lessee is in Default at the time consent is requested.

(g) Notwithstanding the foregoing, allowing a de minimis portion of the Premises, ie. 20 square feet or less, to be used by a third party vendor in connection with the installation of a vending machine or payphone shall not constitute a subletting.

12.2 **Terms and Conditions Applicable to Assignment and Subletting.**

(a) Regardless of Lessor's consent, no assignment or subletting shall: (i) be effective without the express written assumption by such assignee or sublessee of the obligations of Lessee under this Lease, (ii) release Lessee of any obligations hereunder, or (iii) alter the primary liability of Lessee for the payment of Rent or for the performance of any other obligations to be performed by Lessee.

(b) Lessor may accept Rent or performance of Lessee's obligations from any person other than Lessee pending approval or disapproval of an assignment. Neither a delay in the approval or disapproval of such assignment nor the acceptance of Rent or performance shall constitute a waiver or estoppel of Lessor's right to exercise its remedies for Lessee's Default or Breach.

(c) Lessor's consent to any assignment or subletting shall not constitute a consent to any subsequent assignment or subletting.

(d) In the event of any Default or Breach by Lessee, Lessor may proceed directly against Lessee, any Guarantors or anyone else responsible for the performance of Lessee's obligations under this Lease, including any assignee or sublessee, without first exhausting Lessor's remedies against any other person or entity responsible therefor to Lessor, or any security held by Lessor.

(e) Each request for consent to an assignment or subletting shall be in writing, accompanied by information relevant to Lessor's determination as to the financial and operational responsibility and appropriateness of the proposed assignee or sublessee, including but not limited to the intended use and/or required modification of the Premises, if any, together with a fee of $500 as consideration for Lessor's considering and processing said request. Lessee agrees to provide Lessor with such other or additional information and/or documentation as may be reasonably requested. (See also Paragraph 36)

(f) Any assignee of, or sublessee under, this Lease shall, by reason of accepting such assignment, entering into such sublease, or entering into possession of the Premises or any portion thereof, be deemed to have assumed and agreed to conform and comply with each and every term, covenant, condition and obligation herein to be observed or performed by Lessee during the term of said assignment or sublease, other than such obligations as are contrary to or inconsistent with provisions of an assignment or sublease to which Lessor has specifically consented to in writing.

(g) Lessor's consent to any assignment or subletting shall not transfer to the assignee or sublessee any Option granted to the original Lessee by this Lease unless such transfer is specifically consented to by Lessor in writing. (See Paragraph 39.2)

12.3 **Additional Terms and Conditions Applicable to Subletting.** The following terms and conditions shall apply to any subletting by Lessee of all or any part of the Premises and shall be deemed included in all subleases under this Lease whether or not expressly incorporated therein:

(a) Lessee hereby assigns and transfers to Lessor all of Lessee's interest in all Rent payable on any sublease, and Lessor may collect such Rent and apply same toward Lessee's obligations under this Lease; provided, however, that until a Breach shall occur in the performance of Lessee's obligations, Lessee may collect said Rent. In the event that the amount collected by Lessor exceeds Lessee's then outstanding obligations any such excess shall be refunded to Lessee. Lessor shall not, by reason of the foregoing or any assignment of such sublease, nor by reason of the collection of Rent, be deemed liable to the sublessee for any failure of Lessee to perform and comply with any of Lessee's obligations to such sublessee. Lessee hereby irrevocably authorizes and directs any such sublessee, upon receipt of a written notice from Lessor stating that a Breach exists in the performance of Lessee's obligations under this Lease, to pay to Lessor all Rent due and to become due under the sublease. Sublessee shall rely upon any such notice from Lessor and shall pay all Rents to Lessor without any obligation or right to inquire as to whether such Breach exists, notwithstanding any claim from Lessee to the contrary.

(b) In the event of a Breach by Lessee, Lessor may, at its option, require sublessee to attorn to Lessor, in which event Lessor shall undertake the obligations of the sublessor under such sublease from the time of the exercise of said option to the expiration of such sublease; provided, however, Lessor shall not be liable for any prepaid rents or security deposit paid by such sublessee to such sublessor or for any prior Defaults or Breaches of such sublessor.

(c) Any matter requiring the consent of the sublessor under a sublease shall also require the consent of Lessor.

(d) No sublessee shall further assign or sublet all or any part of the Premises without Lessor's prior written consent.

(e) Lessor shall deliver a copy of any notice of Default or Breach by Lessee to the sublessee, who shall have the right to cure the Default of Lessee within the grace period, if any, specified in such notice. The sublessee shall have a right of reimbursement and offset from and against Lessee for any such Defaults cured by the sublessee.

13. **Default; Breach; Remedies.**

13.1 **Default; Breach.** A **"Default"** is defined as a failure by the Lessee to comply with or perform any of the terms, covenants, conditions or Rules and Regulations under this Lease. A **"Breach"** is defined as the occurrence of one or more of the following Defaults, and the failure of Lessee to cure such Default within any applicable grace period:

(a) The abandonment of the Premises; or the vacating of the Premises without providing a commercially reasonable level of security, or where the coverage of the property insurance described in Paragraph 8.3 is jeopardized as a result thereof, or without providing reasonable assurances to minimize potential vandalism.

(b) The failure of Lessee to make any payment of Rent or any Security Deposit required to be made by Lessee hereunder, whether to Lessor or to a third party, when due, to provide reasonable evidence of insurance or surety bond, or to fulfill any obligation under this Lease which endangers or threatens life or property, where such failure continues for a period of 3 business days following written notice to Lessee. THE ACCEPTANCE BY LESSOR OF A PARTIAL PAYMENT OF RENT OR SECURITY DEPOSIT SHALL NOT CONSTITUTE A WAIVER OF ANY OF LESSOR'S RIGHTS, INCLUDING LESSOR'S RIGHT TO RECOVER POSSESSION OF THE PREMISES.

(c) The failure of Lessee to allow Lessor and/or its agents access to the Premises or the commission of waste, act or acts constituting public or private nuisance, and/or an illegal activity on the Premises by Lessee, where such actions continue for a period of 3 business days following written notice to Lessee.

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(d) The failure by Lessee to provide (i) reasonable written evidence of compliance with Applicable Requirements, (ii) the service contracts, (iii) the rescission of an unauthorized assignment or subletting, (iv) an Estoppel Certificate or financial statements, (v) a requested subordination, (vi) evidence concerning any guaranty and/or Guarantor, (vii) any document requested under Paragraph 42, (viii) material safety data sheets (MSDS), or (ix) any other documentation or information which Lessor may reasonably require of Lessee under the terms of this Lease, where any such failure continues for a period of 10 days following written notice to Lessee.

(e) A Default by Lessee as to the terms, covenants, conditions or provisions of this Lease, or of the rules adopted under Paragraph 40 hereof, other than those described in subparagraphs 13.1(a), (b), (c) or (d), above, where such Default continues for a period of 30 days after written notice; provided, however, that if the nature of Lessee's Default is such that more than 30 days are reasonably required for its cure, then it shall not be deemed to be a Breach if Lessee commences such cure within said 30 day period and thereafter diligently prosecutes such cure to completion.

(f) The occurrence of any of the following events: (i) the making of any general arrangement or assignment for the benefit of creditors; (ii) becoming a **"debtor"** as defined in 11 U.S.C. §101 or any successor statute thereto (unless, in the case of a petition filed against Lessee, the same is dismissed within 60 days); (iii) the appointment of a trustee or receiver to take possession of substantially all of Lessee's assets located at the Premises or of Lessee's interest in this Lease, where possession is not restored to Lessee within 30 days; or (iv) the attachment, execution or other judicial seizure of substantially all of Lessee's assets located at the Premises or of Lessee's interest in this Lease, where such seizure is not discharged within 30 days; provided, however, in the event that any provision of this subparagraph is contrary to any applicable law, such provision shall be of no force or effect, and not affect the validity of the remaining provisions.

(g) The discovery that any financial statement of Lessee or of any Guarantor given to Lessor was materially false.

(h) If the performance of Lessee's obligations under this Lease is guaranteed: (i) the death of a Guarantor, (ii) the termination of a Guarantor's liability with respect to this Lease other than in accordance with the terms of such guaranty, (iii) a Guarantor's becoming insolvent or the subject of a bankruptcy filing, (iv) a Guarantor's refusal to honor the guaranty, or (v) a Guarantor's breach of its guaranty obligation on an anticipatory basis, and Lessee's failure, within 60 days following written notice of any such event, to provide written alternative assurance or security, which, when coupled with the then existing resources of Lessee, equals or exceeds the combined financial resources of Lessee and the Guarantors that existed at the time of execution of this Lease.

13.2 **Remedies.** If Lessee fails to perform any of its affirmative duties or obligations, within 10 days after written notice (or in case of an emergency, without notice), Lessor may, at its option, perform such duty or obligation on Lessee's behalf, including but not limited to the obtaining of reasonably required bonds, insurance policies, or governmental licenses, permits or approvals. Lessee shall pay to Lessor an amount equal to 115% of the costs and expenses incurred by Lessor in such performance upon receipt of an invoice therefor. In the event of a Breach, Lessor may, with or without further notice or demand, and without limiting Lessor in the exercise of any right or remedy which Lessor may have by reason of such Breach:

(a) Terminate Lessee's right to possession of the Premises by any lawful means, in which case this Lease shall terminate and Lessee shall immediately surrender possession to Lessor. In such event Lessor shall be entitled to recover from Lessee: (i) the unpaid Rent which had been earned at the time of termination; (ii) the worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that the Lessee proves could have been reasonably avoided; (iii) the worth at the time of award of the amount by which the unpaid rent for the balance of the term after the time of award exceeds the amount of such rental loss that the Lessee proves could be reasonably avoided; and (iv) any other amount necessary to compensate Lessor for all the detriment proximately caused by the Lessee's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, including but not limited to the cost of recovering possession of the Premises, expenses of reletting, including necessary renovation and alteration of the Premises, reasonable attorneys' fees, and that portion of any leasing commission paid by Lessor in connection with this Lease applicable to the unexpired term of this Lease. The worth at the time of award of the amount referred to in provision (iii) of the immediately preceding sentence shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of the District within which the Premises are located at the time of award plus one percent. Efforts by Lessor to mitigate damages caused by Lessee's Breach of this Lease shall not waive Lessor's right to recover any damages to which Lessor is otherwise entitled. If termination of this Lease is obtained through the provisional remedy of unlawful detainer, Lessor shall have the right to recover in such proceeding any unpaid Rent and damages as are recoverable therein, or Lessor may reserve the right to recover all or any part thereof in a separate suit. If a notice and grace period required under Paragraph 13.1 was not previously given, a notice to pay rent or quit, or to perform or quit given to Lessee under the unlawful detainer statute shall also constitute the notice required by Paragraph 13.1. In such case, the applicable grace period required by Paragraph 13.1 and the unlawful detainer statute shall run concurrently, and the failure of Lessee to cure the Default within the greater of the two such grace periods shall constitute both an unlawful detainer and a Breach of this Lease entitling Lessor to the remedies provided for in this Lease and/or by said statute.

(b) Continue the Lease and Lessee's right to possession and recover the Rent as it becomes due, in which event Lessee may sublet or assign, subject only to reasonable limitations. Acts of maintenance, efforts to relet, and/or the appointment of a receiver to protect the Lessor's interests, shall not constitute a termination of the Lessee's right to possession.

(c) Pursue any other remedy now or hereafter available under the laws or judicial decisions of the state wherein the Premises are located. The expiration or termination of this Lease and/or the termination of Lessee's right to possession shall not relieve Lessee from liability under any indemnity provisions of this Lease as to matters occurring or accruing during the term hereof or by reason of Lessee's occupancy of the Premises.

13.3 **Inducement Recapture.** Any agreement for free or abated rent or other charges, or for the giving or paying by Lessor to or for Lessee of any cash or other bonus, inducement or consideration for Lessee's entering into this Lease, all of which concessions are hereinafter referred to as **"Inducement Provisions,"** shall be deemed conditioned upon Lessee's full and faithful performance of all of the terms, covenants and conditions of this Lease. Upon Breach of this Lease by Lessee, any such Inducement Provision shall automatically be deemed deleted from this Lease and of no further force or effect, and any rent, other charge, bonus, inducement or consideration theretofore abated, given or paid by Lessor under such an inducement Provision shall be immediately due and payable by Lessee to Lessor, notwithstanding any subsequent cure of said Breach by Lessee. The acceptance by Lessor of rent or the cure of the Breach which initiated the operation of this paragraph shall not be deemed a waiver by Lessor of the provisions of this paragraph unless specifically so stated in writing by Lessor at the time of such acceptance.

13.4 **Late Charges.** Lessee hereby acknowledges that late payment by Lessee of Rent will cause Lessor to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges, and late charges which may be imposed upon Lessor by any Lender. Accordingly, if any Rent shall not be received by Lessor within 5 days after such amount shall be due, then, without any requirement for notice to Lessee, Lessee shall immediately pay to Lessor a one-time

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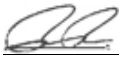

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late charge equal to 10% of each such overdue amount or $100, whichever is greater. The Parties hereby agree that such late charge represents a fair and reasonable estimate of the costs Lessor will incur by reason of such late payment. Acceptance of such late charge by Lessor shall in no event constitute a waiver of Lessee's Default or Breach with respect to such overdue amount, nor prevent the exercise of any of the other rights and remedies granted hereunder. In the event that a late charge is payable hereunder, whether or not collected, for 3 consecutive installments of Base Rent, then notwithstanding any provision of this Lease to the contrary, Base Rent shall, at Lessor's option, become due and payable quarterly in advance.

13.5 **Interest.** Any monetary payment due Lessor hereunder, other than late charges, not received by Lessor, when due shall bear interest from the 31st day after it was due. The interest (**"Interest"**) charged shall be computed at the rate of 10% per annum but shall not exceed the maximum rate allowed by law. Interest is payable in addition to the potential late charge provided for in Paragraph 13.4.

13.6 **Breach by Lessor.**

(a) **Notice of Breach.** Lessor shall not be deemed in breach of this Lease unless Lessor fails within a reasonable time to perform an obligation required to be performed by Lessor. For purposes of this Paragraph, a reasonable time shall in no event be less than 30 days after receipt by Lessor, and any Lender whose name and address shall have been furnished Lessee in writing for such purpose, of written notice specifying wherein such obligation of Lessor has not been performed; provided, however, that if the nature of Lessor's obligation is such that more than 30 days are reasonably required for its performance, then Lessor shall not be in breach if performance is commenced within such 30 day period and thereafter diligently pursued to completion.

(b) **Performance by Lessee on Behalf of Lessor.** In the event that neither Lessor nor Lender cures said breach within 30 days after receipt of said notice, or if having commenced said cure they do not diligently pursue it to completion, then Lessee may elect to cure said breach at Lessee's expense and offset from Rent the actual and reasonable cost to perform such cure, provided, however, that such offset shall not exceed an amount equal to the greater of one month's Base Rent or the Security Deposit, reserving Lessee's right to seek reimbursement from Lessor for any such expense in excess of such offset. Lessee shall document the cost of said cure and supply said documentation to Lessor.

14. **Condemnation.** If the Premises or any portion thereof are taken under the power of eminent domain or sold under the threat of the exercise of said power (collectively **"Condemnation"**), this Lease shall terminate as to the part taken as of the date the condemning authority takes title or possession, whichever first occurs. If more than 10% of the Building, or more than 25% of that portion of the Premises not occupied by any building, is taken by Condemnation, Lessee may, at Lessee's option, to be exercised in writing within 10 days after Lessor shall have given Lessee written notice of such taking (or in the absence of such notice, within 10 days after the condemning authority shall have taken possession) terminate this Lease as of the date the condemning authority takes such possession. If Lessee does not terminate this Lease in accordance with the foregoing, this Lease shall remain in full force and effect as to the portion of the Premises remaining, except that the Base Rent shall be reduced in proportion to the reduction in utility of the Premises caused by such Condemnation. Condemnation awards and/or payments shall be the property of Lessor, whether such award shall be made as compensation for diminution in value of the leasehold, the value of the part taken, or for severance damages; provided, however, that Lessee shall be entitled to any compensation paid by the condemnor for Lessee's relocation expenses, loss of business goodwill and/or Trade Fixtures, without regard to whether or not this Lease is terminated pursuant to the provisions of this Paragraph. All Alterations and Utility Installations made to the Premises by Lessee, for purposes of Condemnation only, shall be considered the property of the Lessee and Lessee shall be entitled to any and all compensation which is payable therefor. In the event that this Lease is not terminated by reason of the Condemnation, Lessor shall repair any damage to the Premises caused by such Condemnation.

15. **Brokerage Fees.**

15.1 **Additional Commission.** In addition to the payments owed pursuant to Paragraph 1.9 above, and unless Lessor and the Brokers otherwise agree in writing, Lessor agrees that: (a) if Lessee exercises any Option, (b) if Lessee or anyone affiliated with Lessee acquires any rights to the Premises or other premises owned by Lessor and located within the same Project, if any, within which the Premises is located, (c) if Lessee remains in possession of the Premises, with the consent of Lessor, after the expiration of this Lease, or (d) if Base Rent is increased, whether by agreement or operation of an escalation clause herein, then, Lessor shall pay Brokers a fee in accordance with the fee schedule of the Brokers in effect at the time the Lease was executed.

15.2 **Assumption of Obligations.** Any buyer or transferee of Lessor's interest in this Lease shall be deemed to have assumed Lessor's obligation hereunder. Brokers shall be third party beneficiaries of the provisions of Paragraphs 1.9, 15, 22 and 31. If Lessor fails to pay to Brokers any amounts due as and for brokerage fees pertaining to this Lease when due, then such amounts shall accrue Interest. In addition, if Lessor fails to pay any amounts to Lessee's Broker when due, Lessee's Broker may send written notice to Lessor and Lessee of such failure and if Lessor fails to pay such amounts within 10 days after said notice, Lessee shall pay said monies to its Broker and offset such amounts against Rent. In addition, Lessee's Broker shall be deemed to be a third party beneficiary of any commission agreement entered into by and/or between Lessor and Lessor's Broker for the limited purpose of collecting any brokerage fee owed.

15.3 **Representations and Indemnities of Broker Relationships.** Lessee and Lessor each represent and warrant to the other that it has had no dealings with any person, firm, broker or finder (other than the Brokers, if any) in connection with this Lease, and that no one other than said named Brokers is entitled to any commission or finder's fee in connection herewith. Lessee and Lessor do each hereby agree to indemnify, protect, defend and hold the other harmless from and against liability for compensation or charges which may be claimed by any such unnamed broker, finder or other similar party by reason of any dealings or actions of the indemnifying Party, including any costs, expenses, attorneys' fees reasonably incurred with respect thereto.

16. **Estoppel Certificates.**

(a) Each Party (as **"Responding Party"**) shall within 10 days after written notice from the other Party (the **"Requesting Party"**) execute, acknowledge and deliver to the Requesting Party a statement in writing in form similar to the then most current **"Estoppel Certificate"** form published by the AIR Commercial Real Estate Association, plus such additional information, confirmation and/or statements as may be reasonably requested by the Requesting Party.

(b) If the Responding Party shall fail to execute or deliver the Estoppel Certificate within such 10 day period, the Requesting Party may execute an Estoppel Certificate stating that: (i) the Lease is in full force and effect without modification except as may be represented by the Requesting Party, (ii) there are no uncured defaults in the Requesting Party's performance, and (iii) if Lessor is the Requesting Party, not more than one month's rent has been paid in advance. Prospective purchasers and encumbrancers may rely upon the Requesting Party's Estoppel Certificate, and the Responding Party shall be estopped from denying the truth of the facts contained in said Certificate. In addition, Lessee acknowledges that any failure on its part to provide such an Estoppel Certificate will expose Lessor to risks and potentially cause Lessor to incur costs not contemplated by this Lease, the extent of which will be extremely difficult to ascertain. Accordingly, should the Lessee fail to execute and/or deliver a requested Estoppel

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Certificate in a timely fashion the monthly Base Rent shall be automatically increased, without any requirement for notice to Lessee, by an amount equal to 10% of the then existing Base Rent or $100, whichever is greater for remainder of the Lease. The Parties agree that such increase in Base Rent represents fair and reasonable compensation for the additional risk/costs that Lessor will incur by reason of Lessee's failure to provide the Estoppel Certificate. Such increase in Base Rent shall in no event constitute a waiver of Lessee's Default or Breach with respect to the failure to provide the Estoppel Certificate nor prevent the exercise of any of the other rights and remedies granted hereunder.

(c) If Lessor desires to finance, refinance, or sell the Premises, or any part thereof, Lessee and all Guarantors shall within 10 days after written notice from Lessor deliver to any potential lender or purchaser designated by Lessor such financial statements as may be reasonably required by such lender or purchaser, including but not limited to Lessee's financial statements for the past 3 years. All such financial statements shall be received by Lessor and such lender or purchaser in confidence and shall be used only for the purposes herein set forth.

17. **Definition of Lessor.** The term **"Lessor"** as used herein shall mean the owner or owners at the time in question of the fee title to the Premises, or, if this is a sublease, of the Lessee's interest in the prior lease. In the event of a transfer of Lessor's title or interest in the Premises or this Lease, Lessor shall deliver to the transferee or assignee (in cash or by credit) any unused Security Deposit held by Lessor. Upon such transfer or assignment and delivery of the Security Deposit, as aforesaid, the prior Lessor shall be relieved of all liability with respect to the obligations and/or covenants under this Lease thereafter to be performed by the Lessor. Subject to the foregoing, the obligations and/or covenants in this Lease to be performed by the Lessor shall be binding only upon the Lessor as hereinabove defined.

18. **Severability.** The invalidity of any provision of this Lease, as determined by a court of competent jurisdiction, shall in no way affect the validity of any other provision hereof.

19. **Days.** Unless otherwise specifically indicated to the contrary, the word "days" as used in this Lease shall mean and refer to calendar days.

20. **Limitation on Liability.** The obligations of Lessor under this Lease shall not constitute personal obligations of Lessor or its partners, members, directors, officers or shareholders, and Lessee shall look to the Premises, and to no other assets of Lessor, for the satisfaction of any liability of Lessor with respect to this Lease, and shall not seek recourse against Lessor's partners, members, directors, officers or shareholders, or any of their personal assets for such satisfaction.

21. **Time of Essence.** Time is of the essence with respect to the performance of all obligations to be performed or observed by the Parties under this Lease.

22. **No Prior or Other Agreements; Broker Disclaimer.** This Lease contains all agreements between the Parties with respect to any matter mentioned herein, and no other prior or contemporaneous agreement or understanding shall be effective. Lessor and Lessee each represents and warrants to the Brokers that it has made, and is relying solely upon, its own investigation as to the nature, quality, character and financial responsibility of the other Party to this Lease and as to the use, nature, quality and character of the Premises. Brokers have no responsibility with respect thereto or with respect to any default or breach hereof by either Party.

23. **Notices.**

23.1 **Notice Requirements.** All notices required or permitted by this Lease or applicable law shall be in writing and may be delivered in person (by hand or by courier) or may be sent by regular, certified or registered mail or U.S. Postal Service Express Mail, with postage prepaid, or by facsimile transmission, or by email, and shall be deemed sufficiently given if served in a manner specified in this Paragraph 23. The addresses noted adjacent to a Party's signature on this Lease shall be that Party's address for delivery or mailing of notices. Either Party may by written notice to the other specify a different address for notice, except that upon Lessee's taking possession of the Premises, the Premises shall constitute Lessee's address for notice. A copy of all notices to Lessor shall be concurrently transmitted to such party or parties at such addresses as Lessor may from time to time hereafter designate in writing.

23.2 **Date of Notice.** Any notice sent by registered or certified mail, return receipt requested, shall be deemed given on the date of delivery shown on the receipt card, or if no delivery date is shown, the postmark thereon. If sent by regular mail the notice shall be deemed given 72 hours after the same is addressed as required herein and mailed with postage prepaid. Notices delivered by United States Express Mail or overnight courier that guarantees next day delivery shall be deemed given 24 hours after delivery of the same to the Postal Service or courier. Notices transmitted by facsimile transmission or by email shall be deemed delivered upon telephone confirmation of receipt (if by fax, a confirmation report from fax machine is sufficient), provided a copy is also delivered via delivery or mail. If notice is received on a Saturday, Sunday or legal holiday, it shall be deemed received on the next business day.

24. **Waivers.**

(a) No waiver by Lessor of the Default or Breach of any term, covenant or condition hereof by Lessee, shall be deemed a waiver of any other term, covenant or condition hereof, or of any subsequent Default or Breach by Lessee of the same or of any other term, covenant or condition hereof. Lessor's consent to, or approval of, any act shall not be deemed to render unnecessary the obtaining of Lessor's consent to, or approval of, any subsequent or similar act by Lessee, or be construed as the basis of an estoppel to enforce the provision or provisions of this Lease requiring such consent.

(b) The acceptance of Rent by Lessor shall not be a waiver of any Default or Breach by Lessee. Any payment by Lessee may be accepted by Lessor on account of moneys or damages due Lessor, notwithstanding any qualifying statements or conditions made by Lessee in connection therewith, which such statements and/or conditions shall be of no force or effect whatsoever unless specifically agreed to in writing by Lessor at or before the time of deposit of such payment.

(c) THE PARTIES AGREE THAT THE TERMS OF THIS LEASE SHALL GOVERN WITH REGARD TO ALL MATTERS RELATED THERETO AND HEREBY WAIVE THE PROVISIONS OF ANY PRESENT OR FUTURE STATUTE TO THE EXTENT THAT SUCH STATUTE IS INCONSISTENT WITH THIS LEASE.

25. **Disclosures Regarding The Nature of a Real Estate Agency Relationship.**

(a) When entering into a discussion with a real estate agent regarding a real estate transaction, a Lessor or Lessee should from the outset understand what type of agency relationship or representation it has with the agent or agents in the transaction. Lessor and Lessee acknowledge being advised by the Brokers in this transaction, as follows:

(i) Lessor's Agent. A Lessor's agent under a listing agreement with the Lessor acts as the agent for the Lessor only. A Lessor's agent or subagent has the following affirmative obligations: To the Lessor: A fiduciary duty of utmost care, integrity, honesty, and loyalty in dealings with the Lessor. To the Lessee and the Lessor: a. Diligent exercise of reasonable skills and care in performance of the agent's duties. b. A duty of honest and fair dealing and good faith. c. A duty to disclose all facts known to the agent materially affecting the value or desirability of the property that are not known to, or within the diligent attention and observation of, the Parties. An agent is not obligated to reveal to either Party

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any confidential information obtained from the other Party which does not involve the affirmative duties set forth above.

(ii) Lessee's Agent. An agent can agree to act as agent for the Lessee only. In these situations, the agent is not the Lessor's agent, even if by agreement the agent may receive compensation for services rendered, either in full or in part from the Lessor. An agent acting only for a Lessee has the following affirmative obligations. To the Lessee: A fiduciary duty of utmost care, integrity, honesty, and loyalty in dealings with the Lessee. To the Lessee and the Lessor: a. Diligent exercise of reasonable skills and care in performance of the agent's duties. b. A duty of honest and fair dealing and good faith. c. A duty to disclose all facts known to the agent materially affecting the value or desirability of the property that are not known to, or within the diligent attention and observation of, the Parties. An agent is not obligated to reveal to either Party any confidential information obtained from the other Party which does not involve the affirmative duties set forth above.

(iii) Agent Representing Both Lessor and Lessee. A real estate agent, either acting directly or through one or more associate licenses, can legally be the agent of both the Lessor and the Lessee in a transaction, but only with the knowledge and consent of both the Lessor and the Lessee. In a dual agency situation, the agent has the following affirmative obligations to both the Lessor and the Lessee: a. A fiduciary duty of utmost care, integrity, honesty and loyalty in the dealings with either Lessor or the Lessee. b. Other duties to the Lessor and the Lessee as stated above in subparagraphs (i) or (ii). In representing both Lessor and Lessee, the agent may not without the express permission of the respective Party, disclose to the other Party that the Lessor will accept rent in an amount less than that indicated in the listing or that the Lessee is willing to pay a higher rent than that offered. The above duties of the agent in a real estate transaction do not relieve a Lessor or Lessee from the responsibility to protect their own interests. Lessor and Lessee should carefully read all agreements to assure that they adequately express their understanding of the transaction. A real estate agent is a person qualified to advise about real estate. If legal or tax advice is desired, consult a competent professional.

(b) Brokers have no responsibility with respect to any default or breach hereof by either Party. The Parties agree that no lawsuit or other legal proceeding involving any breach of duty, error or omission relating to this Lease may be brought against Broker more than one year after the Start Date and that the liability (including court costs and attorneys' fees), of any Broker with respect to any such lawsuit and/or legal proceeding shall not exceed the fee received by such Broker pursuant to this Lease; provided, however, that the foregoing limitation on each Broker's liability shall not be applicable to any gross negligence or willful misconduct of such Broker.

(c) Lessor and Lessee agree to identify to Brokers as "Confidential" any communication or information given Brokers that is considered by such Party to be confidential.

26. **No Right To Holdover.** Lessee has no right to retain possession of the Premises or any part thereof beyond the expiration or termination of this Lease. In the event that Lessee holds over, then the Base Rent shall be increased to 150% of the Base Rent applicable immediately preceding the expiration or termination. Holdover Base Rent shall be calculated on monthly basis. Nothing contained herein shall be construed as consent by Lessor to any holding over by Lessee.

27. **Cumulative Remedies.** No remedy or election hereunder shall be deemed exclusive but shall, wherever possible, be cumulative with all other remedies at law or in equity.

28. **Covenants and Conditions; Construction of Agreement.** All provisions of this Lease to be observed or performed by Lessee are both covenants and conditions. In construing this Lease, all headings and titles are for the convenience of the Parties only and shall not be considered a part of this Lease. Whenever required by the context, the singular shall include the plural and vice versa. This Lease shall not be construed as if prepared by one of the Parties, but rather according to its fair meaning as a whole, as if both Parties had prepared it.

29. **Binding Effect; Choice of Law.** This Lease shall be binding upon the Parties, their personal representatives, successors and assigns and be governed by the laws of the State in which the Premises are located. Any litigation between the Parties hereto concerning this Lease shall be initiated in the county in which the Premises are located.

30. **Subordination; Attornment; Non-Disturbance.**

30.1 **Subordination.** This Lease and any Option granted hereby shall be subject and subordinate to any ground lease, mortgage, deed of trust, or other hypothecation or security device (collectively, **"Security Device"**), now or hereafter placed upon the Premises, to any and all advances made on the security thereof, and to all renewals, modifications, and extensions thereof. Lessee agrees that the holders of any such Security Devices (in this Lease together referred to as **"Lender"**) shall have no liability or obligation to perform any of the obligations of Lessor under this Lease. Any Lender may elect to have this Lease and/or any Option granted hereby superior to the lien of its Security Device by giving written notice thereof to Lessee, whereupon this Lease and such Options shall be deemed prior to such Security Device, notwithstanding the relative dates of the documentation or recordation thereof.

30.2 **Attornment.** In the event that Lessor transfers title to the Premises, or the Premises are acquired by another upon the foreclosure or termination of a Security Device to which this Lease is subordinated (i) Lessee shall, subject to the non-disturbance provisions of Paragraph 30.3, attorn to such new owner, and upon request, enter into a new lease, containing all of the terms and provisions of this Lease, with such new owner for the remainder of the term hereof, or, at the election of the new owner, this Lease will automatically become a new lease between Lessee and such new owner, and (ii) Lessor shall thereafter be relieved of any further obligations hereunder and such new owner shall assume all of Lessor's obligations, except that such new owner shall not: (a) be liable for any act or omission of any prior lessor or with respect to events occurring prior to acquisition of ownership; (b) be subject to any offsets or defenses which Lessee might have against any prior lessor, (c) be bound by prepayment of more than one month's rent, or (d) be liable for the return of any security deposit paid to any prior lessor which was not paid or credited to such new owner.

30.3 **Non-Disturbance.** With respect to Security Devices entered into by Lessor after the execution of this Lease, Lessee's subordination of this Lease shall be subject to receiving a commercially reasonable non-disturbance agreement (a **"Non-Disturbance Agreement"**) from the Lender which Non-Disturbance Agreement provides that Lessee's possession of the Premises, and this Lease, including any options to extend the term hereof, will not be disturbed so long as Lessee is not in Breach hereof and attorns to the record owner of the Premises. Further, within 60 days after the execution of this Lease, Lessor shall, if requested by Lessee, use its commercially reasonable efforts to obtain a Non-Disturbance Agreement from the holder of any pre-existing Security Device which is secured by the Premises. In the event that Lessor is unable to provide the Non-Disturbance Agreement within said 60 days, then Lessee may, at Lessee's option, directly contact Lender and attempt to negotiate for the execution and delivery of a Non-Disturbance Agreement.

30.4 **Self-Executing.** The agreements contained in this Paragraph 30 shall be effective without the execution of any further documents; provided, however, that, upon written request from Lessor or a Lender in connection with a sale, financing or refinancing of the Premises, Lessee and Lessor shall execute such further writings as may be reasonably required to separately document any subordination, attornment and/or Non-Disturbance Agreement provided for herein.

31. **Attorneys' Fees.** If any Party or Broker brings an action or proceeding involving the Premises whether founded in tort, contract or equity, or

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to declare rights hereunder, the Prevailing Party (as hereafter defined) in any such proceeding, action, or appeal thereon, shall be entitled to reasonable attorneys' fees. Such fees may be awarded in the same suit or recovered in a separate suit, whether or not such action or proceeding is pursued to decision or judgment. The term, **"Prevailing Party"** shall include, without limitation, a Party or Broker who substantially obtains or defeats the relief sought, as the case may be, whether by compromise, settlement, judgment, or the abandonment by the other Party or Broker of its claim or defense. The attorneys' fees award shall not be computed in accordance with any court fee schedule, but shall be such as to fully reimburse all attorneys' fees reasonably incurred. In addition, Lessor shall be entitled to attorneys' fees, costs and expenses incurred in the preparation and service of notices of Default and consultations in connection therewith, whether or not a legal action is subsequently commenced in connection with such Default or resulting Breach ($200 is a reasonable minimum per occurrence for such services and consultation).

32. **Lessor's Access; Showing Premises; Repairs.** Lessor and Lessor's agents shall have the right to enter the Premises at any time, in the case of an emergency, and otherwise at reasonable times after reasonable prior notice for the purpose of showing the same to prospective purchasers, lenders, or tenants, and making such alterations, repairs, improvements or additions to the Premises as Lessor may deem necessary or desirable and the erecting, using and maintaining of utilities, services, pipes and conduits through the Premises and/or other premises as long as there is no material adverse effect to Lessee's use of the Premises. All such activities shall be without abatement of rent or liability to Lessee.

33. **Auctions.** Lessee shall not conduct, nor permit to be conducted, any auction upon the Premises without Lessor's prior written consent. Lessor shall not be obligated to exercise any standard of reasonableness in determining whether to permit an auction.

34. **Signs.** Lessor may place on the Premises ordinary **"For Sale"** signs at any time and ordinary **"For Lease"** signs during the last 6 months of the term hereof. Except for ordinary "for sublease" signs, Lessee shall not place any sign upon the Premises without Lessor's prior written consent. All signs must comply with all Applicable Requirements.

35. **Termination; Merger.** Unless specifically stated otherwise in writing by Lessor, the voluntary or other surrender of this Lease by Lessee, the mutual termination or cancellation hereof, or a termination hereof by Lessor for Breach by Lessee, shall automatically terminate any sublease or lesser estate in the Premises; provided, however, that Lessor may elect to continue any one or all existing subtenancies. Lessor's failure within 10 days following any such event to elect to the contrary by written notice to the holder of any such lesser interest, shall constitute Lessor's election to have such event constitute the termination of such interest.

36. **Consents.** Except as otherwise provided herein, wherever in this Lease the consent of a Party is required to an act by or for the other Party, such consent shall not be unreasonably withheld or delayed. Lessor's actual reasonable costs and expenses (including but not limited to architects', attorneys', engineers' and other consultants' fees) incurred in the consideration of, or response to, a request by Lessee for any Lessor consent, including but not limited to consents to an assignment, a subletting or the presence or use of a Hazardous Substance, shall be paid by Lessee upon receipt of an invoice and supporting documentation therefor. Lessor's consent to any act, assignment or subletting shall not constitute an acknowledgment that no Default or Breach by Lessee of this Lease exists, nor shall such consent be deemed a waiver of any then existing Default or Breach, except as may be otherwise specifically stated in writing by Lessor at the time of such consent. The failure to specify herein any particular condition to Lessor's consent shall not preclude the imposition by Lessor at the time of consent of such further or other conditions as are then reasonable with reference to the particular matter for which consent is being given. In the event that either Party disagrees with any determination made by the other hereunder and reasonably requests the reasons for such determination, the determining party shall furnish its reasons in writing and in reasonable detail within 10 business days following such request.

37. **Guarantor.**

37.1 **Execution.** The Guarantors, if any, shall each execute a guaranty in the form most recently published by the AIR Commercial Real Estate Association, and each such Guarantor shall have the same obligations as Lessee under this Lease.

37.2 **Default.** It shall constitute a Default of the Lessee if any Guarantor fails or refuses, upon request to provide: (a) evidence of the execution of the guaranty, including the authority of the party signing on Guarantor's behalf to obligate Guarantor, and in the case of a corporate Guarantor, a certified copy of a resolution of its board of directors authorizing the making of such guaranty, (b) current financial statements, (c) an Estoppel Certificate, or (d) written confirmation that the guaranty is still in effect.

38. **Quiet Possession.** Subject to payment by Lessee of the Rent and performance of all of the covenants, conditions and provisions on Lessee's part to be observed and performed under this Lease, Lessee shall have quiet possession and quiet enjoyment of the Premises during the term hereof.

39. **Options.** If Lessee is granted any Option, as defined below, then the following provisions shall apply:

39.1 **Definition. "Option"** shall mean: (a) the right to extend or reduce the term of or renew this Lease or to extend or reduce the term of or renew any lease that Lessee has on other property of Lessor; (b) the right of first refusal or first offer to lease either the Premises or other property of Lessor; (c) the right to purchase, the right of first offer to purchase or the right of first refusal to purchase the Premises or other property of Lessor.

39.2 **Options Personal To Original Lessee.** Any Option granted to Lessee in this Lease is personal to the original Lessee, and cannot be assigned or exercised by anyone other than said original Lessee and only while the original Lessee is in full possession of the Premises and, if requested by Lessor, with Lessee certifying that Lessee has no intention of thereafter assigning or subletting.

39.3 **Multiple Options.** In the event that Lessee has any multiple Options to extend or renew this Lease, a later Option cannot be exercised unless the prior Options have been validly exercised.

39.4 **Effect of Default on Options.**

(a) Lessee shall have no right to exercise an Option: (i) during the period commencing with the giving of any notice of Default and continuing until said Default is cured, (ii) during the period of time any Rent is unpaid (without regard to whether notice thereof is given Lessee), (iii) during the time Lessee is in Breach of this Lease, or (iv) in the event that Lessee has been given 3 or more notices of separate Default, whether or not the Defaults are cured, during the 12 month period immediately preceding the exercise of the Option.

(b) The period of time within which an Option may be exercised shall not be extended or enlarged by reason of Lessee's inability to exercise an Option because of the provisions of Paragraph 39.4(a).

(c) An Option shall terminate and be of no further force or effect, notwithstanding Lessee's due and timely exercise of the Option, if, after such exercise and prior to the commencement of the extended term or completion of the purchase, (i) Lessee fails to pay Rent for a period of 30 days after such Rent becomes due (without any necessity of Lessor to give notice thereof), or (ii) if Lessee commits a Breach of this Lease.

40. **Multiple Buildings.** If the Premises are a part of a group of buildings controlled by Lessor, Lessee agrees that it will abide by and conform to all reasonable rules and regulations which Lessor may make from time to time for the management, safety, and care of said properties, including the

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care and cleanliness of the grounds and including the parking, loading and unloading of vehicles, and to cause its employees, suppliers, shippers, customers, contractors and invitees to so abide and conform. Lessee also agrees to pay its fair share of common expenses incurred in connection with such rules and regulations.

41. **Security Measures.** Lessee hereby acknowledges that the Rent payable to Lessor hereunder does not include the cost of guard service or other security measures, and that Lessor shall have no obligation whatsoever to provide same. Lessee assumes all responsibility for the protection of the Premises, Lessee, its agents and invitees and their property from the acts of third parties.

42. **Reservations.** Lessor reserves to itself the right, from time to time, to grant, without the consent or joinder of Lessee, such easements, rights and dedications that Lessor deems necessary, and to cause the recordation of parcel maps and restrictions, so long as such easements, rights, dedications, maps and restrictions do not unreasonably interfere with the use of the Premises by Lessee. Lessee agrees to sign any documents reasonably requested by Lessor to effectuate any such easement rights, dedication, map or restrictions.

43. **Performance Under Protest.** If at any time a dispute shall arise as to any amount or sum of money to be paid by one Party to the other under the provisions hereof, the Party against whom the obligation to pay the money is asserted shall have the right to make payment "under protest" and such payment shall not be regarded as a voluntary payment and there shall survive the right on the part of said Party to institute suit for recovery of such sum. If it shall be adjudged that there was no legal obligation on the part of said Party to pay such sum or any part thereof, said Party shall be entitled to recover such sum or so much thereof as it was not legally required to pay. A Party who does not initiate suit for the recovery of sums paid "under protest" with 6 months shall be deemed to have waived its right to protest such payment.

44. **Authority; Multiple Parties; Execution.**

(a) If either Party hereto is a corporation, trust, limited liability company, partnership, or similar entity, each individual executing this Lease on behalf of such entity represents and warrants that he or she is duly authorized to execute and deliver this Lease on its behalf. Each Party shall, within 30 days after request, deliver to the other Party satisfactory evidence of such authority.

(b) If this Lease is executed by more than one person or entity as "Lessee", each such person or entity shall be jointly and severally liable hereunder. It is agreed that any one of the named Lessees shall be empowered to execute any amendment to this Lease, or other document ancillary thereto and bind all of the named Lessees, and Lessor may rely on the same as if all of the named Lessees had executed such document.

(c) This Lease may be executed by the Parties in counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

45. **Conflict.** Any conflict between the printed provisions of this Lease and typewritten or handwritten provisions shall be controlled by the typewritten or handwritten provisions.

46. **Offer.** Preparation of this Lease by either Party or their agent and submission of same to the other Party shall not be deemed an offer to lease to the other Party. This Lease is not intended to be binding until executed and delivered by all Parties hereto.

47. **Amendments.** This Lease may be modified only in writing, signed by the Parties in interest at the time of the modification. As long as they do not materially change Lessee's obligations hereunder, Lessee agrees to make such reasonable non-monetary modifications to this Lease as may be reasonably required by a Lender in connection with the obtaining of normal financing or refinancing of the Premises.

48. **Waiver of Jury Trial. THE PARTIES HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO TRIAL BY JURY IN ANY ACTION OR PROCEEDING INVOLVING THE PROPERTY OR ARISING OUT OF THIS AGREEMENT**.

49. **Arbitration of Disputes.** An Addendum requiring the Arbitration of all disputes between the Parties and/or Brokers arising out of this Lease ☐ **is** ☒ **is not** attached to this Lease.

50. **Accessibility; Americans with Disabilities Act.**

(a) The Premises: ☒ have not undergone an inspection by a Certified Access Specialist (CASp). ☐ have undergone an inspection by a Certified Access Specialist (CASp) and it was determined that the Premises met all applicable construction-related accessibility standards pursuant to California Civil Code §55.51 et seq. ☐ have undergone an inspection by a Certified Access Specialist (CASp) and it was determined that the Premises did not meet all applicable construction-related accessibility standards pursuant to California Civil Code §55.51 et seq.

(b) Since compliance with the Americans with Disabilities Act (ADA) is dependent upon Lessee's specific use of the Premises, Lessor makes no warranty or representation as to whether or not the Premises comply with ADA or any similar legislation. In the event that Lessee's use of the Premises requires modifications or additions to the Premises in order to be in ADA compliance, Lessee agrees to make any such necessary modifications and/or additions at Lessee's expense.

LESSOR AND LESSEE HAVE CAREFULLY READ AND REVIEWED THIS LEASE AND EACH TERM AND PROVISION CONTAINED HEREIN, AND BY THE EXECUTION OF THIS LEASE SHOW THEIR INFORMED AND VOLUNTARY CONSENT THERETO. THE PARTIES HEREBY AGREE THAT, AT THE TIME THIS LEASE IS EXECUTED, THE TERMS OF THIS LEASE ARE COMMERCIALLY REASONABLE AND EFFECTUATE THE INTENT AND PURPOSE OF LESSOR AND LESSEE WITH RESPECT TO THE PREMISES.

ATTENTION: NO REPRESENTATION OR RECOMMENDATION IS MADE BY THE AIR COMMERCIAL REAL ESTATE ASSOCIATION OR BY ANY BROKER AS TO THE LEGAL SUFFICIENCY, LEGAL EFFECT, OR TAX CONSEQUENCES OF THIS LEASE OR THE TRANSACTION TO WHICH IT RELATES. THE PARTIES ARE URGED TO:

1. SEEK ADVICE OF COUNSEL AS TO THE LEGAL AND TAX CONSEQUENCES OF THIS LEASE.

2. RETAIN APPROPRIATE CONSULTANTS TO REVIEW AND INVESTIGATE THE CONDITION OF THE PREMISES. SAID INVESTIGATION SHOULD INCLUDE BUT NOT BE LIMITED TO: THE POSSIBLE PRESENCE OF HAZARDOUS SUBSTANCES, THE ZONING OF THE PREMISES, THE STRUCTURAL INTEGRITY, THE CONDITION OF THE ROOF AND OPERATING SYSTEMS, AND THE SUITABILITY OF THE PREMISES FOR LESSEE'S INTENDED USE.

WARNING: **IF THE PREMISES IS LOCATED IN A STATE OTHER THAN CALIFORNIA, CERTAIN PROVISIONS OF THE LEASE MAY NEED TO BE REVISED TO COMPLY WITH THE LAWS OF THE STATE IN WHICH THE PREMISES IS LOCATED.**

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The parties hereto have executed this Lease at the place and on the dates specified above their respective signatures.

Executed at: Henderson, NV
On: 9-4-14

By **LESSOR:**

Geiger Court, LLC

By: /s/ Hal Tilbury
Name Printed: Hal Tilbury
Title: General Partner
By:
Name Printed:
Title:
Address: 2560 Anthem Village Drive, Suite 200
Henderson, NV 89052
Telephone:(760) 410-9000
Facsimile:( )
Email:
Email:
Federal ID No.

BROKER:
Lee & Associates Commercial Real Estate
Services-North San Diego County, Inc.
Attn: Peter Merz/Daniel Knoke
Title:
Address: 1900 Wright Place, Suite 200
Carlsbad, CA 92008
Telephone:
Facsimile:

Federal ID No.
Broker/Agent BRE License #:

Executed at: Vista, CA
On: 08/22/14

By **LESSEE:**

Exagen Diagnostics, Inc.

By: /s/ Ron Rocca
Name Printed: Ron Rocca
Title: CEO
By:
Name Printed:
Title:
Address: 801 University Blvd, Ste 103
Albuquerque, NM 87106
Telephone:( )
Facsimile:( )
Email:
Email:
Federal ID No.

BROKER:
Cassidy Turley

Attn: Steven Field
Title:
Address: 1000 Aviara Pkwy #100
Carlsbad, CA 92011
Telephone:
Facsimile:( )
Email:
Federal ID No.
Broker/Agent BRE License #:

INITIALS **INITIALS**

ADDENDUM TO LEASE DATED AUGUST 15, 2014 BY AND BETWEEN GEIGER COURT, LLC, AS LESSOR, AND EXAGEN DIAGNOSTICS, INC., AS LESSEE, FOR THE PREMISES KNOWN AS 1221 LIBERTY WAY, VISTA, CALIFORNIA 92083.

50– BASE RENT SCHEDULE:

Per Paragraph 50, Base Rent shall be as follows:

February 1, 2015 - January 31, 2016	$15,798.00/month plus operating expenses (NNN's)*
February 1, 2016 - January 31, 2017	$16,344.00/month plus operating expenses (NNN's)*
February 1, 2017 - January 31, 2018	$16,910.00/month plus operating expenses (NNN's)*

* Per paragraph 58, Lessee is paying $0.01 per SF per month for using the furniture. The base rental rate per month is $0.80/SF per month with annual increases of 3.5%. The rental schedule includes a monthly charge of $195.00 ($19,504 SF x $0.01/SF) added, after calculating annual increases, as a flat rate to each month of the lease term. Operating expenses (NNN's) are defined as all obligations of Lessee stated in the Lease in addition to Base Rent.

51– EARLY OCCUPANCY:

Lessee shall be granted early occupancy, free of base rent and operating expenses upon Lessor vacating premises and substantial completion of premises' improvements.

52– TENANT IMPROVEMENTS:

Lessor, at its sole cost shall complete the following:

A. Professionally clean entire Premises, including warehouse.

B. New carpet to existing carpeted office areas, color of Lessee's choice. Grade of carpet to be similar to what presently exists in the building and shall not exceed $2.65/SF (based on estimate of high quality carpet from Tri-City Flooring in Vista).

C. New paint to existing office area, color of Lessee's choice.

D. Replace any stained or damaged ceiling tiles.

E. Replace any burned out light fixtures.

F. Lessee to otherwise accept the Premises in its current AS-IS condition, however prior to delivery of possession, Lessor and Lessee shall conduct a walk-through of the Premises to develop a punch list of any minor, miscellaneous repairs that shall be completed by Lessor at Lessor's sole cost and expense.

53– SIGNAGE:

Lessee shall be permitted to install building top and window signage at Lessee's sole cost. All signage shall confirm to all zoning, CC&Rs, and reasonable Lessor approval. Lessor, at its sole cost shall remove current building signage.

54– HVAC:

Prior to Lease execution, Lessor to provide equipment list and maintenance records for Lessee's review. In the event any of the existing HVAC units are in poor condition or if the term of the lease exceeds the remaining useful life of any of the units, then Lessor shall be responsible for the repair and/or replacement at its sole cost.

55– SECURITY DEPOSIT AND MONIES PAID UPON EXECUTION:

Total security deposit shall be $40,412.00 (2x last month's rent plus operating expenses). Upon execution of Lease, Lessee shall pay half of this security deposit ($20,206.00). Upon waiving the termination options described in Paragraph 56, Lessee shall pay the additional $20,206.00 balance due for the security deposit.

56– TERMINATION OPTION:

Lessee shall have the one-time Option to Terminate the Lease agreement on or before November 1, 2014 and shall pay a termination fee equal to half of the Security Deposit which shall be immediately due and payable upon Lessee's exercising such Option to Terminate. This termination option shall expire automatically after November 1, 2014.

57– PREPAID RENT:

Upon Lessee's waiver of the Termination Option, or November 1, 2014, whichever occurs sooner, Lessee will deliver to Lessor a check representing the first month's rent.

58– EXISTING FURNITURE:

Existing office furniture shall remain with the Premises for Lessee's usage, free of charge, during the Lease Term. Furniture is owned by Lessor and shall remain in the Premises at the expiration of the Lease Term. Excludes file cabinets, electronic equipment, telephone equipment, and telephones. Lessee may use furniture for $0.01/SF per month during the Lease Term. At the end of the Lease, they may either keep the furniture or leave it in Premises at their sole option.

Lessor and Lessee shall take an inventory and mutually inspect the current condition of all furniture to remain in the Premises. Lessee agrees to keep all existing furniture in good order and repair during the lease term and shall return Lessor in such condition, less normal wear and tear.

59– STANDSTILL PERIOD:

Lessor agrees to take the Premises off the market upon Lease execution and Lessee's submittal of Security Deposit, and until Lessee's waiver of the Termination Option or November 1, whichever occurs sooner.

60– EXPIRATION:

This lease shall automatically expire if not executed by Lessee by 5:00pm on Monday, August 25, 2016.

IN, WITNESS WHEREOF, Lessor and Lessee have executed this Addendum concurrently with the Lease of even date herewith.

"LESSOR"		"LESSEE"	
GEIGER COURT, LLC		EXAGEN DIAGNOSTICS, INC.	
By:	/s/ Hal Tilbury	By:	/s/ Ron Rocca
	Hal Tilbury		Ron Rocca
Its:	General Partner	Its:	CEO
Date:	9.4.2014	Date:	08/22/14

OPTION(S) TO EXTEND
STANDARD LEASE ADDENDUM

Dated August 15, 2014

By and Between (Lessor) Geiger Court, LLC

By and Between (Lessee) Exagen Diagnostics, Inc.

Address of Premises: 1221 Liberty Way
Vista, CA

Paragraph 60

A. OPTION(S) TO EXTEND:

Lessor hereby grants to Lessee the option to extend the term of this Lease for one (1) additional twenty-four (24) month period(s) commencing when the prior term expires upon each and all of the following terms and conditions:

(i) In order to exercise an option to extend, Lessee must give written notice of such election to Lessor and Lessor must receive the same at least 90 but not more than 180 months prior to the date that the option period would commence, time being of the essence. If proper notification of the exercise of an option is not given and/or received, such option shall automatically expire. Options (if there are more than one) may only be exercised consecutively.

(ii) The provisions of paragraph 39, including those relating to Lessee's Default set forth in paragraph 39.4 of this Lease, are conditions of this Option.

(iii) Except for the provisions of this Lease granting an option or options to extend the term, all of the terms and conditions of this Lease except where specifically modified by this option shall apply.

(iv) This Option is personal to the original Lessee, and cannot be assigned or exercised by anyone other than said original Lessee and only while the original Lessee is in full possession of the Premises and without the intention of thereafter assigning or subletting.

(v) The monthly rent for each month of the option period shall be calculated as follows, using the method(s) indicated below:

(Check Method(s) to be Used and Fill in Appropriately)

☐ **I. Cost of Living Adjustment(s) (COLA)**

a. On (Fill in COLA Dates):

the Base Rent shall be adjusted by the change, if any, from the Base Month specified below, in the Consumer Price Index of the Bureau of Labor Statistics of the U.S. Department of Labor for (select one): ☐ CPI W (Urban Wage Earners and Clerical Workers) or ☐ CPI U (All Urban Consumers), for (Fill in Urban Area):

All Items (1982-1984 = 100), herein referred to as "CPI".

b. The monthly Base Rent payable in accordance with paragraph A.I.a. of this Addendum shall be calculated as follows: the Base Rent set forth in paragraph 1.5 of the attached Lease, shall be multiplied by a fraction the numerator of which shall be the CPI of the calendar month 2 months prior to the month(s) specified in paragraph A.I.a. above during which the adjustment is to take effect, and the denominator of which shall be the CPI of the calendar month which is 2 months prior to (select one): ☐ the first month of the term of this Lease as set forth in paragraph 1.3 ("Base Month") or ☐ (Fill in Other "Base Month"):

The sum so calculated shall constitute the new monthly Base Rent hereunder, but in no event, shall any such new monthly Base Rent be less than the Base Rent payable for the month immediately preceding the rent adjustment.

c. In the event the compilation and/or publication of the CPI shall be transferred to any other governmental department or bureau or agency or shall be discontinued, then the index most nearly the same as the CPI shall be used to make such calculation. In the event that the Parties cannot agree on such alternative index, then the matter shall be submitted for decision to the American Arbitration Association in accordance with the then rules of said Association and the decision of the arbitrators shall be binding upon the parties. The cost of said Arbitration shall be paid equally by the Parties.

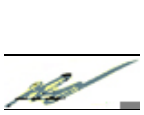
☒ **II. Market Rental Value Adjustment(s) (MRV)**

a. On (Fill in MRV Adjustment Date(s)) February 1, 2018 the Base Rent shall be adjusted to the "Market Rental Value" of the property as follows:

1) Four months prior to each Market Rental Value Adjustment Date described above, the Parties shall attempt to agree upon what the new MRV will be on the adjustment date. If agreement cannot be reached, within thirty days, then:

(a) Lessor and Lessee shall immediately appoint a mutually acceptable appraiser or broker to establish the new MRV within the next 30 days. Any associated costs will be split equally between the Parties, or

(b) Both Lessor and Lessee shall each immediately make a reasonable determination of the MRV and submit such determination, in



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writing, to arbitration in accordance with the following provisions:

(i) Within 15 days thereafter, Lessor and Lessee shall each select an ☐ appraiser or ☐ broker (**"Consultant" -** check one) of their choice to act as an arbitrator. The two arbitrators so appointed shall immediately select a third mutually acceptable Consultant to act as a third arbitrator.

(ii) The 3 arbitrators shall within 30 days of the appointment of the third arbitrator reach a decision as to what the actual MRV for the Premises is, and whether Lessor's or Lessee's submitted MRV is the closest thereto. The decision of a majority of the arbitrators shall be binding on the Parties. The submitted MRV which is determined to be the closest to the actual MRV shall thereafter be used by the Parties.

(iii) If either of the Parties fails to appoint an arbitrator within the specified 15 days, the arbitrator timely appointed by one of them shall reach a decision on his or her own, and said decision shall be binding on the Parties.

(iv) The entire cost of such arbitration shall be paid by the party whose submitted MRV is not selected, ie. the one that is NOT the closest to the actual MRV.

2) When determining MRV, the Lessor, Lessee and Consultants shall consider the terms of comparable market transactions which shall include, but no limited to, rent, rental adjustments, abated rent, lease term and financial condition of tenants.

3) Notwithstanding the foregoing, the new Base Rent shall not be less than the rent payable for the month immediately preceding the rent adjustment.

b. Upon the establishment of each New Market Rental Value:

1) the new MRV will become the new "Base Rent" for the purpose of calculating any further Adjustments, and

2) the first month of each Market Rental Value term shall become the new "Base Month" for the purpose of calculating any further Adjustments.

☐ **III. Fixed Rental Adjustment(s) (FRA)**

The Base Rent shall be increased to the following amounts on the dates set forth below:

On (Fill in FRA Adjustment Date(s)):	The New Base Rent shall be:

☐ **IV. Initial Term Adjustments.**

The formula used to calculate adjustments to the Base Rate during the original Term of the Lease shall continue to be used during the extended term.

B. NOTICE:

Unless specified otherwise herein, notice of any rental adjustments, other than Fixed Rental Adjustments, shall be made as specified in paragraph 23 of the Lease.

C. BROKER'S FEE:

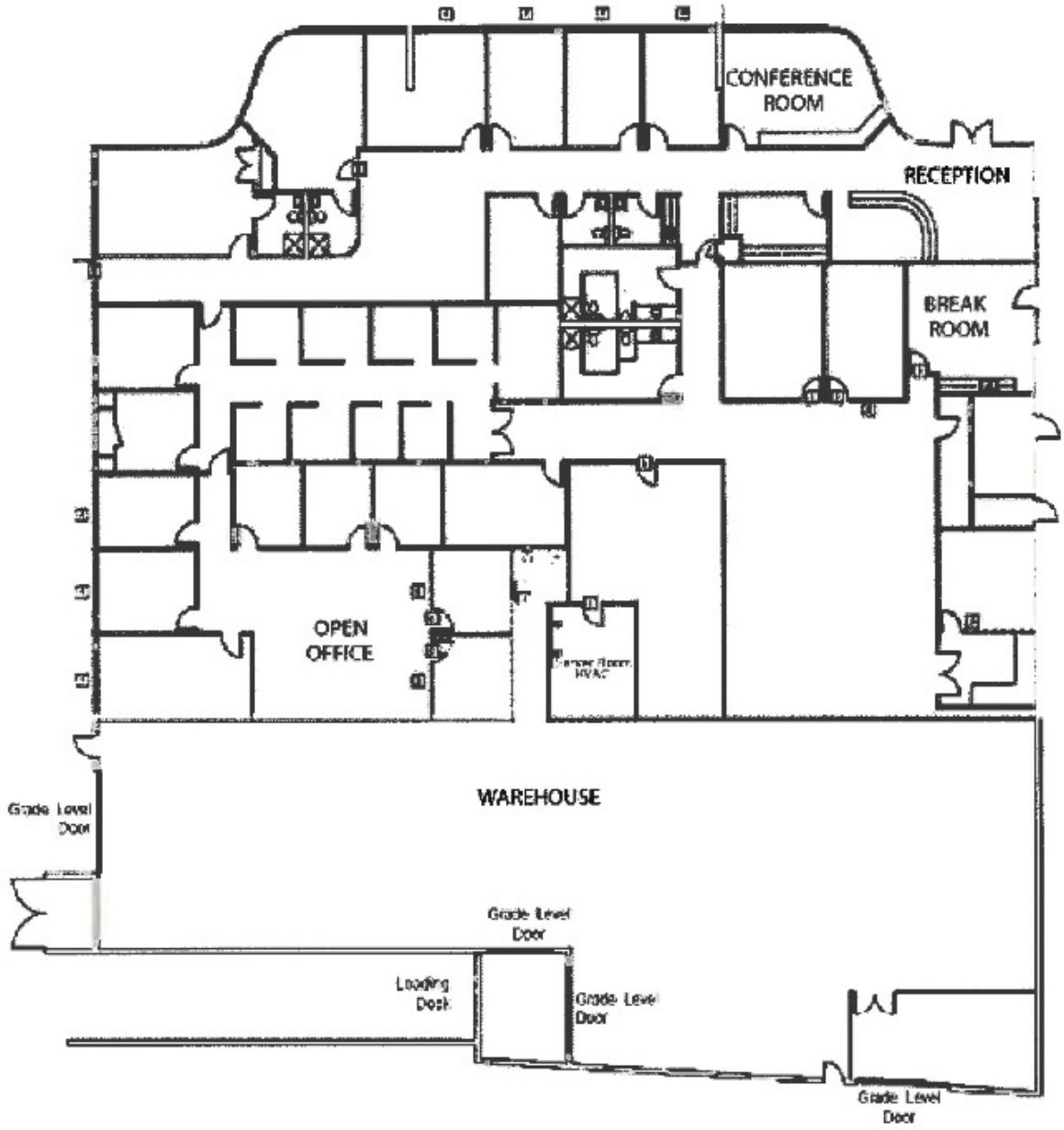
The Brokers shall be paid a Brokerage Fee for each adjustment specified above in accordance with paragraph 15 of the Lease or if applicable, paragraph 9 of the Sublease.

NOTICE: These forms are often modified to meet changing requirements of law and industry needs. Always write or call to make sure you are utilizing the most current form: AIR Commercial Real Estate Association, 500 N Brand Blvd, Suite 900, Glendale, CA 91203. Telephone No. (213) 687-8777. Fax No.: (213) 687-8616.

INITIALS **INITIALS**

 FORM OE-4-04/14E

EXHIBIT A - PREMISES



1221 LIBERTY WAY

VISTA, CA

STANDARD LEASE DISCLOSURE STATEMENT

1. **LEGAL EFFECT.** Upon acceptance of a binding Lease ("Lease"), Lessor and Lessee (defined in the attached letter) both intend to have a binding legal agreement for the leasing of the Premises (defined in the attached letter) on the terms and conditions set forth therein. Lessor and Lessee acknowledge that Lee & Associates®, Inc. – NSDC (hereinafter referenced as Broker) is not qualified to practice law or authorized to give legal advice or counsel as to any legal matters affecting the Lease. Broker hereby advises Lessor and Lessee to consult with their respective attorneys in connection with any questions each may have as to legal ramifications or effects of the Lease, prior to its execution.

2. **FORM OF LEASE.** Lessor and Lessee each acknowledge that Broker does not assume any responsibility for the accuracy, completeness or form of the lease document. Lessor and Lessee each acknowledge and understand that in delivering the lease agreement, Broker has acted to expedite this transaction on behalf of Lessor and/or Lessee and has functioned within the scope of professional ethics by doing so.

3. **CONCURRENT OFFERS. Lessee and Lessor acknowledge and consent that Broker may represent concurrent and/or competing offers with regard to the purchase or lease of the Premises from one or more prospective buyers or lessees without further notice**.

4. **NO INDEPENDENT INVESTIGATION. Lessor and Lessee acknowledge and understand that any financial statements, information, reports or written materials of any nature whatsoever, as provided by the parties to Broker, and thereafter submitted by Broker to either Lessor and/or Lessee, are so provided without any Independent Investigation by Broker, and as such Broker assumes no responsibility or liability for the accuracy or validity of the same. Any verification of such submitted documents is solely and completely the responsibility of the party to whom such documents have been submitted**.

5. **NO WARRANTY.** Lessor and Lessee acknowledge and understand that no warranties, recommendations or representations are or will be made by Broker as to the accuracy, the legal sufficiency, the legal effect or the tax consequences of any of the documents submitted by Broker to Lessor and/or Lessee, or of the legal sufficiency, legal effect or tax consequences of the transactions contemplated thereby. Furthermore, Lessor and Lessee acknowledge and agree that Broker has made no representations or warranties concerning the ability of the Lessee to use the Premises as intended, the sufficiency or adequacy of the Premises for the intended use or any other matter regarding the Premises, and the parties are relying solely on their own investigations in executing the Lease.

6. **NOTICE REGARDING HAZARDOUS WASTES OR SUBSTANCES AND UNDERGROUND STORAGE TANKS.** Although Broker will disclose any actual knowledge it possesses with respect to the existence of any hazardous wastes, substances or underground storage tanks at the Premises, Broker has not made any independent investigations or obtained reports with respect thereto, except as may be described in a separate written document signed by Broker. All parties hereto acknowledge and understand that Broker makes no representations or warranties regarding the existence or nonexistence of hazardous wastes, substances or underground storage tanks at the Premises. Lessor and Lessee acknowledge that Broker has recommended that they should each contact one or more professionals, such as a civil engineer, geologist, industrial hygienist or other environmental consultants, for advice concerning the existence of hazardous wastes, substances or underground storage tanks.

7. **DISCLOSURE RESPECTING AMERICANS WITH DISABILITIES ACT.** The Americans with Disabilities Act, as well as certain state and local laws, are intended to make many business establishments equally accessible to persons with a variety of disabilities; modifications to Teal property may be required by such laws. Broker is not qualified to advise you as to what, if any, changes may be required now or in the future. The undersigned acknowledge that Broker has recommended that they consult attorneys and qualified design professionals for information regarding whether the Premises are in compliance with applicable law and/or whether modifications and changes are required.

8. **CORPORATE SIGNATURES.** Although there is a presumption under California law that the signature of a corporate president is adequate to bind the corporation, a California Court of Appeals in a 1998 case allowed a party to rebut the normal presumption. Therefore, if either of the parties to the Lease is a corporation, it is advisable: (i) that the Lease be signed by <u>two</u> officers of the corporation, i.e. the president or vice president and the secretary or chief financial officer (note: one individual signing in both the capacity of president and as secretary may not be sufficient), or (ii) that the corporation provide a duly executed corporate resolution authorizing the transaction.

9. **USE AND OCCUPANCY DISCLOSURE.** Broker recommends that Lessee hire qualified contractor(s), consultant(s) or other professional(s) to confirm and verify that the physical characteristics of the Property (including, but not limited to, building, office and land sizes, fire sprinkler capacity, electrical power and all utilities, ceiling clear height, loading door sizes and quantity, railroad service, parking spaces, heating/cooling systems, type of construction, restroom(s) number and size, year built of improvements) are to Lessee's satisfaction and permitted, and that they are adequate to accommodate Lessee's intended use. Broker also recommends that Lessee hire qualified professionals to confirm with applicable governmental agencies that the use and the zoning of the Property are acceptable for Lessee's intended use, and that Lessee will be able to obtain all permits, licenses and other approvals necessary for the intended use.

10. **SEISMIC REINFORCEMENT DISCLOSURE.** Some cities and counties have established or may be establishing minimum standards for structural seismic resistance for certain buildings constructed prior to 1933, 1976 and possibly other dates. Some structures will be required to comply with various standards set forth by the appropriate governmental agencies. Broker is not qualified to advise you as to what, if any, changes may be required now or in the future. The undersigned acknowledge that Broker has recommended that they consult a qualified architect, attorney or other consultant for information regarding this matter.

11. **MOLD DISCLOSURE.** Toxic or other molds may be present within a property in concentrations that may pose a threat to the health of humans. Toxic or other dangerous molds may or may not be visible or apparent to a potential user of the Premises. In order to ascertain the nature and extent of toxic or other molds present in a Premises, it is necessary to conduct testing using qualified environmental expert specializing in mold inspection and analysis. Broker advises Lessee to retain the services of an environmental testing expert for this purpose.

12. **DISCLOSURE REGARDING CITY ORDINANCES.** Some cities enact ordinances, which provide, among other matters, for car and track parking restrictions and regulations, truck loading area requirements and maximum building sizes that can be utilized for a particular use. Additionally, some cities impose special taxes for different uses. All of these restrictions and/or regulations are varied from city to city, and they are constantly changing. Broker is

not qualified to advise you whether the Premises (and/or any related property) or the proposed use thereof complies with any or all city ordinances, or whether the Premises (and/or any related property) might in the future violate these, or any other ordinances, nor is Broker qualified to advise you as to the impact thereof. Broker recommends that each party carefully review all applicable codes, regulations and ordinances affecting the Premises, and consult with their attorneys, consultants, engineers and contractors to determine whether the Premises (and/or any related property) and the proposed use, is and in the future will be in compliance with same.

13. **DISCLOSURES REGARDING THE NATURE OF A REAL ESTATE AGENCY RELATIONSHIP.**

The Lessor and Lessee ("Parties") and Brokers agree that their relationship(s) shall be governed by the principles set forth in the applicable sections of the California Civil Code, as summarized hereafter:

When entering into a discussion with a real estate agent regarding a real estate transaction, the Parties should from the outset understand what type of agency relationship or representation it has with the agent or agents in the transaction. The Parties acknowledge being advised by the Brokers in this transaction, as follows:

(a) **LESSOR'S AGENT.** A Lessor's agent under a listing agreement with the Lessor acts as the agent for the Lessor only. A Lessor's agent or subagent has the following affirmative obligations: (1) To the Seller. A fiduciary duty of utmost care, integrity, honesty, and loyalty in dealings with the Lessor. (2) To the Parties. a. Diligent exercise of reasonable skills and care in performance of the agent's duties. b. A duty of honest and fair dealing and good faith. c. A duty to disclose all facts known to the agent materially affecting the value or desirability of the Premises that are not known to, or within the diligent attention and observation of, the Parties. An agent is not obligated to reveal to either Party any confidential information obtained from the other Party

which does not involve the affirmative duties set forth above.

(b) **LESSEE'S AGENT.** A Leasing agent can, with a Lessee's consent, agree to act as agent for the Lessee only. In these situations, the agent is not the Lessor's agent, even if by agreement the agent may receive compensation for services rendered, either in full or in part from the Lessor. An agent acting only for a Lessee has the following affirmative obligations. (1) To the Lessee. A fiduciary duty of utmost care, integrity, honesty, and loyalty in dealings with the Lessee. (2) To the Parties. a. Diligent exercise of reasonable skills and care in performance of the agent's duties. b. A duty of honest and fair dealing and good faith. c. A duty to disclose all facts known to the agent materially affecting the value or desirability of the Premises that are not known to, or within the diligent attention and observation of, the Parties. An agent is not obligated to reveal to either Party any confidential Information obtained from the other Party which does not involve the affirmative duties set forth above.

(c) **AGENT REPRESENTING BOTH LESSOR AND LESSEE.** A real estate agent, either acting directly or through one or more associate licenses, can legally be the agent of both the Lessor and the Lessee in a transaction, but only with the knowledge and consent of both the Lessor and the Lessee. (1) In a dual agency situation, the agent has the following affirmative obligations to the Parties: a. A fiduciary duty of utmost care, integrity, honesty and loyalty in the dealings with either Lessor or the Lessee. b. Other duties to the Lessor and the Lessee as stated above in their respective sections (a) or (b) (2) In representing both Lessor and Lessee, the agent may not without the express permission of the respective Party, disclose to the other Party that the Lessor will accept a price less than the listing price or that the Lessee will pay a price greater than the price offered. (3) The above duties of the agent in a real estate transaction do not relieve a Lessor or Lessee from the responsibility to protect their own interests. Lessor and Lessee should carefully read all agreements to assure that they adequately express their understanding of the transaction. A real estate agent is a person qualified to advise about real estate. If legal or tax advice is desired, consult a competent professional.

(d) **FURTHER DISCLOSURES.** Throughout this transaction Lessor and Lessee may receive more than one disclosure depending upon the number of agents assisting in the transaction. Lessor and Lessee should each read its contents each time it is presented, considering the relationship between them and the real estate agent in this transaction and that disclosure. Brokers have no responsibility with respect to any default or breach hereof by cither Party. The liability (including court costs and attorneys' fees), of any Broker with respect to any breach of duty, error or omission relating to this Lease shall not exceed the fee received by such Broker pursuant to this Lease; provided, however, that the foregoing limitation on each Broker's liability shall not be applicable to any gross negligence or willful misconduct of such Broker.

Confidential Information: Lessor and Lessee agree to Identify to Brokers as "Confidential" any communication or information given Brokers that is considered by such Party to be confidential.

Understood & Agreed:

Dated: 9-4-14

Signed: /s/ Hal Tilbury
Geiger Court, LLC (Hal Tilbury)

Dated: _____

Signed: /s/ Ron Rocca
Exagen Diagnostics, Inc (Ron Rocca)

Lee & Associates
COMMERCIAL REAL ESTATE SERVICES

CELTIC COMMERCIAL FINANCE®

4 Park Plaza, Suite 300
Irvine, CA 92614

TEL: 949.263.3880
FAX: 949.263.1331

info@celticleasing.com
www.celticleasing.com

January 19, 2018

Mr. Kamal Adawi
CFO
Exagen Diagnostics, Inc.,
1261 Liberty Way,
Vista, CA 92081

RE: Lease Schedule(s) No. 3861A01 to
Celtic Master Lease No. CML-3861A

Dear Mr. Kamal:

This letter shall serve as formal notification that the above referenced transaction has been approved as set forth herein and in the paperwork enclosed as follows:

1) Master Lease No. CML-3861A;

2) Corporate Certificate (of Lessee);

3) Lease Schedule No. 3861A01;

4) Letter Agreement acknowledging a five percent restock Fee;

5) Misdirected Invoice/Assignment of Invoice/Bill of Sale document;

6) Intercreditor Agreement/Subordination form ***(to be executed by creditor prior to funding)***

7) Notarization of Signature;

8) Insurance Authorization form; and

9) Auto Debit Authorization Form.

In addition to having the above listed items duly completed and returned, please also note the following:

A) It is Celtic's understanding that all of the Equipment has been delivered to and is usable by Lessee. In consideration of Celtic approving and subsequently funding this Transaction, Lessee and Celtic mutually agree that the Final Commencement Date shall be the Date of Funding (the date that Celtic and/or its Assignee reimburses Lessee for equipment) and billing from this date, pursuant to Section 4. RENT of the Lease, is appropriate.

B) Please be advised that prior to final funding, a physical inspection of the equipment will be conducted

C) If applicable, provide us with proper sales/use tax exemption documentation—otherwise, a lump sum sales tax charge will need to be paid upfront and/or added to the lease stream, as applicable.

This approval and related funding(s) may, at Lessor's sole discretion, be subject to: no adverse material changes in the financial condition of Lessee or Guarantor(s), if any; approval of the

subject equipment and related vendors; a UCC Search and obtainment of any UCC Releases or Subordinations required as a result thereof; obtainment of acceptable Certificates of Insurance; final legal review and approval of the subject documentation; and rent adjustment to reflect any increase in 4 year interest rate swaps from a base rate of 2.17% through the day of final funding by Lessor or our assignee. Please note that the approval as set forth herein and in the enclosed paperwork is the entire agreement between the parties with respect to the subject equipment and shall supersede any and all prior proposals, letters of intent, negotiations and/or other communications. It is our understanding that all items of equipment have already been delivered to and accepted by Lessee, and that funding is therefore expected to be imminent. Should the funding of the Transaction be delayed, an update of this approval may be required

Thank you for your business and please don't hesitate to call the undersigned or your account representative, Hunter Bestard, if you have any questions or comments.

CELTIC LEASING CORP.
/s/ Valerie Caron
Sincerely,
CELTIC LEASING CORP.

Valerie Caron
Funding Administrator

READ, ACKNOWLEDGED, AND AGREED:
Exagen Diagnostics, Inc.

By: /s/ Kamal Adawi
Name: Kamal Adawi
Title: CFO Date: 2-1-2019

CELTIC LEASING®

MASTER LEASE Number CML- **3861**A
CELTIC LEASING CORP.—Lessor
4 Park Plaza, Suite 300 • Irvine. CA 92614
866.323.5842 • 949.263.3880 • Fax: 949.263.1331

Lessee: **Exagen Diagnostics, Inc.**

Address: **1261 Liberty Way, Vista, CA 92081**

This is a **MASTER LEASE AGREEMENT** (herein called "Lease"). Lessor hereby agrees to lease to Lessee, and Lessee hereby agrees to lease from Lessor, the items of tangible and/or intangible property (collectively called "Equipment" and individually called "Item") described on any Lease Schedule(s) ("Schedule") now or in the future annexed hereto and made a part hereof, subject to the terms and conditions set forth herein. Each Schedule annexed hereto incorporates the terms of this Lease and is independent and enforceable as a separate transaction.

1. QUIET ENJOYMENT: So long as Lessee is not in default hereunder. Lessor shall not disturb Lessee's quiet enjoyment of the Equipment, subject to the terms and conditions of this Lease.

2. NO WARRANTIES AND UNIFORM COMMERCIAL CODE ACKNOWLEDGMENT: Lessee acknowledges that Lessor is not the manufacturer, vendor, developer, distributor, publisher or licensor (for purposes of this Lease, all of which arc called "Manufacturer", both collectively and individually) of the Equipment. Lessee further acknowledges and agrees that **LESSOR MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, AS TO THE MERCHANTABILITY, FITNESS FOR ANY PURPOSE, CONDITION, DESIGN, CAPACITY, SUITABILITY OR PERFORMANCE OF ANY OF THE EQUIPMENT, OR ANY OTHER REPRESENTATION OR WARRANTY WITH RESPECT THERETO, IT BEING AGREED THAT THE EQUIPMENT IS LEASED "AS IS".** LESSEE FURTHER REPRESENTS THAT ALL ITEMS OF EQUIPMENT ARE OF A SIZE, DESIGN AND CAPACITY SELECTED BY IT, AND THAT IT IS SATISFIED THE SAME IS SUITABLE FOR LESSEE'S PURPOSES. Lessor assigns to Lessee any and all Manufacturer warranties, to the extent assignable, for the term of the Lease. Lessor shall have no liability to Lessee or anyone claiming through Lessee for the breach of any such warranty or for any claim, loss, damage or expense of any kind or nature resulting, directly or indirectly, from the delivery, installation, use, operation, performance, or lack or inadequacy thereof, of any Items of Equipment. This Lease is a "Finance Lease" as defined in, and for the purpose only of Division 10 of the California Commercial Code and not necessarily for any accounting purpose or otherwise. Lessee acknowledges that Lessor has informed or advised Lessee, either previously or by this Lease, of the following: (i) the identity of the "Supplier", (ii) that Lessee may have rights under the "Supply Contract", and (iii) that Lessee may contact the Supplier for a description of any such rights. (The terms "Finance Lease", "Supplier" and "Supply Contract" as used herein have the meanings ascribed to them under Division 10 of the California Commercial Code.)

3. **TERM:** The "Commencement Date" for each Item shall be the day that the Item has been delivered to and is usable by Lessee as evidenced by an Acceptance Certificate duly executed by Lessee or. in the absence thereof, the Manufacturer's delivery certification. The "Base Term" as indicated on any Schedule shall be the period beginning on the first day of the calendar quarter (January 1, April 1, July 1 or October 1) following the final Commencement Date ("Final Commencement Date") of the Schedule or. if the Final Commencement Date falls on the first day of a calendar quarter, then that day. and continuing for the number of months specified on the Schedule. This Lease with respect to any Schedule may be terminated as of the last day of the Base Term by either party giving the other party at least six months but not more than twelve months prior written notice of such termination. Otherwise, the "Term" (as defined below) with respect to any Schedule shall automatically be extended in successive one year intervals ["Extension Term(s)"] at the rental amount in effect as of the last billing cycle of the Base Term. Any such Schedule may be terminated as of the last day of any Extension Term by either party giving the other party at least six months, but not more than twelve months, prior written notice of such termination. Any termination notice given by Lessee shall stipulate whether Lessee chooses to purchase the Equipment or renew the Lease as provided in Section 6. Fair Market Value Purchase Option / Renewal Option. or return the Equipment as provided in Section 7. Return of Equipment. The "Term" of each individual Schedule is hereby defined as the period beginning on the first Commencement Date that occurs with respect to all Items subject to the Schedule and continuing through the Base Term and all Extension Terms, if any. Each Schedule now or in the future annexed hereto shall be deemed to incorporate therein these specific terms and conditions and shall have an independent Term.

4. RENT: The monthly rent as shown on each Schedule shall be due and payable by Lessee in the amount of the monthly rent multiplied by the number of months in the billing cycle indicated on the respective Schedule (one month in a monthly billing cycle, three in a quarterly cycle, six in a biannual cycle, etc.) on the first day of the Base Term and on the first day of each billing cycle thereafter, for the remainder of the Term. For Items having a Commencement Date prior to the first day of the Base Term, rent shall be due on a pro rata basis only in the amount of one-thirtieth of the Item's proportional monthly rent for each day from the Item's Commencement Date until, but not including, the first day of the Base Term and shall be payable by Lessee five days after receipt of invoice from Lessor. If any rental or other amounts payable hereunder are not paid within five days of their due date then Lessee shall pay to Lessor upon demand "Delinquency Charges" which shall equal interest compounded monthly at the rate of eighteen percent per annum (or the highest rate allowable by law whichever is less) on the delinquent balance from the date due until the date paid plus a monthly administrative fee of five percent of the cumulative delinquent balance to offset Lessor's collection and accounting costs. Any deposit paid by Lessee to Lessor shall be refundable if the Schedule is not accepted by Lessor. THIS IS A NET LEASE AND LESSEE'S OBLIGATION TO PAY ALL RENTAL CHARGES AND OTHER AMOUNTS DUE HEREUNDER SHALL BE ABSOLUTE AND UNCONDITIONAL UNDER ALL CIRCUMSTANCES AND SHALL NOT BE SUBJECT TO ANY ABATEMENT, DEFENSE, COUNTERCLAIM, SETOFF, RECOUPMENT OR REDUCTION FOR ANY REASON WHATSOEVER EXCEPT AS OTHERWISE PROVIDED HEREIN, IT BEING THE EXPRESS INTENT OF LESSOR AND LESSEE THAT ALL RENTAL AND OTHER AMOUNTS PAYABLE BY LESSEE HEREUNDER SHALL BE AND CONTINUE TO BE PAYABLE IN ALL EVENTS. LESSEE HEREBY WAIVES ALL RIGHTS IT MAY HAVE TO REJECT OR CANCEL THIS LEASE, TO REVOKE ACCEPTANCE OF ANY OF THE EQUIPMENT, AND OR TO GRANT A SECURITY INTEREST IN ANY OF THE EQUIPMENT FOR ANY REASON EXCEPT AS REQUIRED HEREIN.

5. **USE, MAINTENANCE AND LOCATION:** Lessee at its own expense shall properly use the Equipment, keep the Equipment in good working order, repair and condition, comply with all Manufacturer's instructions as to use and operation, and comply with all applicable laws, rules, regulations or orders of any governmental agency with respect to the use, operation, maintenance, care, storage, or location of the Equipment. During the Term, Lessee shall keep in force the best standard maintenance agreement with the Manufacturer, or such other qualified party including qualified self-maintenance by Lessee, as is reasonably acceptable to Lessor, that will ensure: the Equipment is maintained to all current engineering specifications; all repairs, adjustments and replacements are properly made; and all upgrades, enhancements and changes that are available from time to time from the Manufacturer are made to the Equipment. Lessee shall not relocate the Equipment

without Lessor's prior written consent. Lessee shall pay all costs associated with the delivery, installation, use, relocation, and Lessor's inspection of the Equipment. If Lessor requests, Lessee shall affix in a prominent place labels or tags to the Equipment stating that the Equipment is owned by Lessor. Lessee shall permit Lessor to inspect the Equipment from time to time as reasonably determined by Lessor.

6. FAIR MARKET VALUE PURCHASE OPTION / RENEWAL OPTION: Lessee may purchase, or renew this Lease for, all but not less than all of the Equipment subject to any Schedule, provided Lessee is not in default and upon proper written notification to Lessor, as of the expiration of the Term of said Schedule. In the event Lessee notifies Lessor it elects to purchase the Equipment, the purchase price shall be the "Fair Market Value" of the Equipment. For the purpose of this Lease. "Fair Market Value" is defined as the total cost(s) it would take to replace the Equipment on an in-place, installed basis, including all current cost(s) and expense(s) for the purchase, assembly, installation, delivery, freight, consulting, training, site preparation and any other services that would be required to render such Equipment fully installed, ready and acceptable for use by an end user as of the termination of the Term. If Lessor and Lessee can not agree on a purchase price then the purchase price shall be determined by the average of two Senior Appraisers accredited by the American Society of Appraisers, one chosen by Lessor and one by Lessee, both using the definition of Fair Market Value hereunder in determining their purchase price, the cost of which shall be borne by Lessee. In the event Lessee notifies Lessor it elects to renew, the renewal shall be based upon the Fair Market Value of the Equipment, the then prevailing market conditions. Lessee's credit worthiness and such other terms and conditions to be mutually agreed upon by Lessee and Lessor. If Lessee has properly elected to purchase or renew any given Schedule, but neither a Fair Market Value purchase price nor the terms and conditions of a renewal have been determined at least thirty days prior to the expiration of the Term, then the Term of the Schedule shall continue on a month to month basis at the rental that was in effect at the end of the Base Term, until such time that either a Fair Market Value purchase price or the terms and conditions of a renewal have been determined.

7. RETURN OF EQUIPMENT: If the Equipment is to be returned upon termination of the Term with respect to any Schedule or if for any other reason. Lessee shall immediately discontinue all use of the Equipment and at its own cost, de-install, pack and ship the Equipment to a location(s) within the United States, all in accordance with instructions provided by Lessor. In the case of Equipment which is software. Lessee will also certify in a written form acceptable to Lessor that: (i) all tangible software has been delivered to Lessor; (ii) all tangible records and intangible software have been destroyed; (iii) Lessee has not retained the software in any form; (iv) Lessee will not use the software after termination; and (v) Lessee has not received from Manufacturer anything of value relating to or in exchange for Lessee's use, rental, or possession of the software during the duration of the Lease (including a trade-in, substitution or upgrade allowance). Upon return of the Equipment. Lessee shall take all actions necessary to ensure that the Equipment will be eligible for the best standard Manufacturer Maintenance Contract and shall pay all fees, charges and expenses for maintenance certification or recertification by the Manufacturer and for all costs for repair or replacement of damaged Equipment. Until Lessee has complied with all of the requirements of this Section, rent payment obligations will continue on a month to month basis at the monthly rent delineated on the Schedule. Lessee shall allow Lessor to inspect, at Lessee's cost, all of Lessee's locations to ensure compliance hereunder.

8. TITLE; PERSONAL PROPERTY: Except as otherwise provided in this Lease or any Schedule, title to the Equipment shall remain in Lessor. Lessee shall at all times keep the Equipment free and clear of all liens, claims, levies, and legal processes, and shall at its expense protect and defend Lessor's title and/or license rights in the Equipment. In the event any of the Equipment is software governed by a software license. Lessee shall keep said license current for the entire Term and to the extent the license allows title to the software to pass to licensee, such title shall vest and remain in Lessor. Lessee acknowledges that the license to use the software is being provided by the Manufacturer solely because of payments made by Lessor and in consideration therefor Lessor has obtained Lessee's interest in the License. Lessee forgoes any future claim to the software, including any right to purchase and/or use the software beyond the Term, except as otherwise provided in this Lease. Lessee hereby agrees and does hereby appoint Lessor or its assigns its true and lawful attorney-in-fact to prepare UCC's or other instruments necessary, and authorizes Lessor to cause this Lease or other instruments in Lessor's determination, to be filed or recorded at Lessee's expense in order to protect Lessor's interest in the Equipment, and grants Lessor the right to execute and deliver such instruments for and on behalf of Lessee. If requested by Lessor, then Lessee agrees to execute and deliver any such instruments and agrees to pay or reimburse Lessor for any searches, filings, recordings, inspections, fees, taxes or any other costs incurred as necessary to protect Lessor's interest in the Equipment. Lessee also authorizes Lessor to insert on any Schedule and on related supplemental lease documentation information commonly determined after execution by Lessee such as: serial numbers and other Equipment identification data, Equipment locations. Commencement Dates, and Final Commencement Date. Lessee shall take all steps necessary to ensure that the Equipment is and remains personal properly.

9. ALTERATIONS: Lessee shall make no alterations, modifications, attachments, improvements, enhancements, revisions or additions to any of the Equipment (collectively called "Alterations"), without Lessor's prior written consent. All Alterations that are made shall become part of the Equipment and shall be the property of Lessor. Equipment which is software shall include all updates, revisions, upgrades, new versions, enhancements, modifications, derivative works, maintenance fixes, translations, adaptations, and copies of the foregoing or of the original version of the software whether obtained from the Manufacturer or from any source whatsoever, and references in this Lease to software will be interpreted as references to any and all of the foregoing.

10. TAXES: Lessee shall pay all fees, assessments and taxes (except for income taxes based solely on Lessor's net income assessed by the U.S. Internal Revenue Service and/or any member State of the United States of America), including but not limited to, sales, use, property, excise, intangibles, single business, stamp, documentary and any other costs imposed by any authority, with respect to the use, delivery, rental/lease, possession, purchase, ownership or sale of the Equipment and shall at its own cost and expense keep the Equipment free and clear of all levies, liens or encumbrances arising therefrom. Lessee shall file all required personal property tax returns relating to the Equipment. In the event Lessor files appropriate properly tax returns or other reports. Lessee shall upon demand immediately reimburse Lessor for all amounts paid by Lessor, plus processing costs.

11. LOSS OR DAMAGE: Lessee shall bear the entire risk of loss, damage, theft, destruction, confiscation, requisition, inoperability, erasure, or incapacity, for or from any cause whatsoever, of any or all Items during the period the Equipment is in transit to or from, or in the possession of, Lessee ("Event of Loss") and shall hold Lessor harmless against same. Immediately upon its discovery, Lessee shall fully inform Lessor of an Event of Loss. Except as provided herein, no Event of Loss shall relieve Lessee of any obligation hereunder, and all Schedules shall remain in full force and effect without any abatement or interruption of rent. In an Event of Loss, Lessee at its option provided no event of default has occurred hereunder, shall: (a) continue to timely make all rental payments and pay all other amounts due under the Lease and within a commercially expedient time frame, place the Equipment in good working order, repair and condition, or replace the affected Equipment with identical equipment with documentation creating clear title thereto in Lessor; or (b) terminate the Lease with respect to the affected Schedule by paying to Lessor within thirty days the "Casualty Value" which is defined as the sum of: (i) the present value of the unpaid balance of the aggregate rent reserved under the related Schedule calculated using a discount rate of two percent per annum, plus (ii) all accrued but unpaid rentals, taxes. Delinquency Charges, penalties, interest and all or any other sums then due and owing under the related Schedule, plus (iii) the amount of any applicable end of Term purchase option or other end of Term payment or, in the absence thereof, the Fair Market Value of the Equipment plus (iv) an amount reasonably determined by Lessor to make Lessor whole on an after tax basis for any loss, recapture, or unavailability of any tax credit and/or deduction.

12. INSURANCE: Lessee, at its expense, shall provide and maintain in full force and effect at all times that this Lease is in force such casualty, property damage, comprehensive public liability and other insurance in such form and amounts as is and with such companies as shall be satisfactory to Lessor. All such insurance shall provide that it may not be canceled or materially altered without at least thirty days prior written notice to Lessor, shall name Lessor as additional insured and loss payee, and shall not be rescinded, impaired or invalidated by any act or neglect of Lessee.

13. INDEMNITY: Lessee shall indemnify, defend, protect, save and hold harmless Lessor, its employees, officers, directors, agents, assigns and successors from and against any and all claims, actions, costs, expenses (including reasonable attorneys' fees), damages (including any interruption of service, loss of business or other consequential damages), liabilities, penalties, losses, obligations, injuries, demands and liens (including any of the foregoing arising or imposed under the doctrines of "strict liability" or "product liability") of any kind or nature arising out of. connected with, relating to or resulting from the manufacture, purchase, sale, lease, ownership, installation, location, maintenance, operation, condition (including latent and other defects, whether or not discoverable), selection, delivery, return, or any accident in connection therewith, of any Item or Items of Equipment, or by operation of law (including any claim for patent, trademark or copyright infringement), regardless of where, how or by whom operated the provisions of this paragraph shall survive termination or expiration of this Lease.

14. AUTHORITY OF LESSEE TO ENTER LEASE: With respect to this Lease and each Schedule now or in the future annexed hereto. Lessee hereby represents, warrants and covenants that: (i) the execution, delivery and performance thereof have been duly authorized by Lessee; (ii) the individuals executing such have been duly authorized to do so: (iii) the execution and or performance thereof will not result in any default under, or breach of. any judgment, order, law or regulation applicable to Lessee, or of any provision of Lessee's articles of incorporation, bylaws, or any agreement to which Lessee is a party: and (iv) all financial statements and other information submitted by Lessee herewith or at any other time is true and correct without any misleading omissions.

15. ASSIGNMENT: Lessee hereby agrees and acknowledges that Lessor may without notice to Lessee, assign all or any part of Lessor's rights, title and interest in and to this Lease, any Schedule, the Equipment, and any of the rentals or other sums payable hereunder, to any assignee ("Assignee") provided any such assignment shall be made subject to the rights of Lessee herein. Lessee hereby acknowledges that any such assignment does not change the duties of. nor the burden of risk imposed on the Lessee and that Lessee shall not look to Assignee to perform any of Lessor's obligations hereunder and shall not assert against Assignee any defense, counterclaim or setoff it may have against Lessor. Lessee agrees that after receipt of written notice from Lessor of any such assignment Lessee shall pay. if directed by Lessor, any assigned rental and other sums payable hereunder directly to Assignee and will execute and deliver to Assignee such documents as Assignee may reasonably request in order to confirm the interest of Assignee in this Lease. **WITHOUT LESSOR'S PRIOR WRITTEN CONSENT, LESSEE SHALL NOT ASSIGN, TRANSFER, ENCUMBER, SUBLET OR SELL THIS LEASE. ANY SCHEDULE, ANY OF THE EQUIPMENT, OR ANY OF ITS INTEREST THEREIN, IN ANY FORM OR MANNER.**

16. FURTHER ASSURANCES: Upon Lessor's request. Lessee, promptly and at its expense, shall execute and or deliver such documents, instruments and/or assurances, and shall take such further action, as Lessor deems prudent in order to establish and/or protect the rights, interests and remedies of Lessor, and for the confirmation, assignment and or perfection of this Lease and any Schedule hereto, and for the assurance of performance of Lessee's obligations hereunder, such as (but not limited to): a secretary's certificate certifying the authority of the person(s) signing, and/or the resolutions authorizing, this Lease and/or any Schedule: delivery and or acceptance certificates, insurance certificates: an opinion of Lessee's counsel; financial statements and other credit information as reasonably requested by Lessor; intercreditor agreements; subordinations; and a landlord/mortgagee waiver of rights and interests in the Equipment. If Lessee fails to complete when due any such requested item. Lessor, at its sole discretion and notwithstanding the provisions of Section 3. Term herein, may elect to delay the Final Commencement Date of the affected Schedule until any or all such requested items are completed. Until duly executed by an authorized officer of Lessor. Lessee agrees that this Lease and any Schedule executed by Lessee shall constitute an offer by Lessee to enter into the Lease with Lessor.

17. DEFAULT: The occurrence of any of the following shall constitute an event of default hereunder ("Event of Default"): (a) Lessee fails to pay when due any installment of rent or any other amount due hereunder and such failure continues for a period of ten days after receipt of written notice thereof; (b) any financial or other information or any other representation or warranty given to Lessor herein or in connection herewith (including information provided by or on behalf of any Guarantor), proves to be false or misleading: (c) Lessee assigns, transfers, encumbers, sublets or sells this Lease, any Schedule, any of the Equipment, or any of its interest therein, in any form or manner, without Lessor's prior written consent: (d) Lessee fails to observe or perform any other covenant, condition or obligation to be observed or performed by it under this Lease and such failure continues for a period of fifteen days after receipt of written notice thereof: (e) any transaction or series of transactions that results in an ownership change of fifty percent or more of the equity interests of Lessee or any Guarantor of this Lease; (f) Lessee or any Guarantor of this Lease consolidates with or merges into, or sells or leases fifty percent or more of its assets to any individual, corporation, or other entity; (g) Lessee, or any Guarantor of this Lease, ceases doing business as a going concern, dies, makes an assignment for the benefit of creditors, admits in writing its insolvency, files a voluntary petition in bankruptcy, is adjudicated bankrupt or insolvent, files a petition seeking for itself any reorganization, liquidation, dissolution or similar arrangement under any present or future statute, law or regulation, or files an answer admitting the material allegations of a petition filed against it in any such proceedings, consents to or acquiesces in the appointment of a trustee, receiver, or liquidator of it or of any substantial part of its assets, or if its shareholders take any action looking to its dissolution or liquidation: or (h) within sixty days after the commencement of any proceeding against Lessee or any Guarantor of this Lease, seeking reorganization, liquidation, dissolution or similar relief under any present or future statute, law or regulation, such proceedings shall not have been dismissed, or if within sixty days after the appointment without Lessee's consent or acquiescence of any trustee, receiver or liquidator of it or of any substantial part of its assets, such appointment shall not be vacated.

18. REMEDIES: If an Event of Default shall occur. Lessor may, in addition to all available remedies it may have at law or in equity, do any or all of the following: (a) proceed, by appropriate court action, to enforce performance by Lessee of the applicable covenants of this Lease and to recover damages for the breach thereof: (b) by written notice to Lessee, terminate this Lease and/or all or any Schedules hereto and Lessees rights hereunder and/or thereunder; (c) personally or by its agents enter the premises where any of the Equipment is located and take immediate possession of the Equipment without court order or other process of law and free from all claims by Lessee: (d) nullify any end of Term purchase or renewal option; and or (e) recover all unpaid amounts then due and owing including applicable late charges, plus, as liquidated damages for loss of a bargain and not as a penalty, accelerate and declare to be immediately due and payable the unpaid balance of the aggregate rent and other sums reserved hereunder plus the Fair Market Value of the Equipment, without any presentment, demand, protest or further notice (all of which are expressly waived by Lessee). In the event Lessor repossesses any of the Equipment. Lessor may sell, lease or otherwise dispose of said Equipment in such manner, at such times, and upon such terms as Lessor may reasonably determine. If Lessor does repossess and sell the Equipment, the proceeds thereof shall be applied to: (i) all costs and expenses (including attorney's fees) of such disposition; (ii) the unpaid accrued rentals, taxes, fees, delinquency charges, interest and all or any other sums due and owing; (iii) the unpaid accelerated rentals; and (iv) the Fair Market Value of the Equipment. Any excess proceeds shall be remitted to Lessee. If Lessor re-leases the Equipment, the re-lease rentals received for the period through the end of the

original Base Term of the Lease shall be first applied as described in (i), (ii), (iii), and (iv), above, with any excess to be remitted to the Lessee. The exercise of any of the foregoing remedies by Lessor shall not constitute a termination of the Lease or of any Schedule unless Lessor so notifies Lessee in writing. All remedies of Lessor shall be deemed cumulative and may be exercised concurrently or separately. The waiver by Lessor of any breach of any obligation of Lessee shall not be deemed a waiver of a breach of any other obligation or of any future breach of the same obligation. The subsequent acceptance of rental payments hereunder by Lessor shall not be deemed a waiver of any prior or existing breach by Lessee regardless of Lessor's knowledge of such breach. If any Schedule is deemed at any lime to be a lease intended as security. Lessee grants Lessor a security interest in the Equipment to secure its obligations under this Lease and all other indebtedness at any time owing by Lessee to Lessor. Lessee agrees that upon the occurrence of an Event of Default, in addition to all of the other rights and remedies available to Lessor hereunder. Lessor shall have all of the rights and remedies of a secured party under the Uniform Commercial Code.

19. PERFORMANCE OF LESSEE'S OBLIGATIONS BY LESSOR: If Lessee fails to perform any of its obligations hereunder. Lessor shall have the right, but shall not be obligated, to perform the same for the account of Lessee without thereby waiving Lessee's default. Any amount paid and any expense, penalty or other liability incurred by Lessor in such performance shall become due and payable by Lessee to Lessor upon demand.

20. PURCHASE AGREEMENTS: In the event any of the Equipment is subject to any acquisition or purchase agreement ("Acquisition Agreement") between Lessee and the Manufacturer, then Lessee, as part of this Lease when approved by Lessor, transfers and assigns to Lessor any and all of Lessee's rights, title and interest (excepting that which is inherent to or granted by this Lease), but none of its obligations (except Lessee's obligation to pay for the Equipment, which Lessor shall do after Lessee's acceptance of the Equipment, provided all documentation required by Lessor has been completed and that Lessor's approval remains valid), in and to the Acquisition Agreement(s) and the subject Equipment IN THE EVENT LESSEE ISSUES A PURCHASE ORDER TO LESSOR WITH RESPECT TO THIS LEASE, ANY SCHEDULE, OR ANY OF THE EQUIPMENT. IT IS AGREED THAT ANY SUCH PURCHASE ORDER IS FOR LESSEE'S INTERNAL PURPOSES ONLY AND THAT NONE OF ITS TERMS AND CONDITIONS SHALL MODIFY THIS LEASE OR ANY RELATED DOCUMENTATION. OR AFFECT EITHER PARTIES' RESPONSIBILITIES AS SET FORTH IN THIS LEASE.

21. NOTICES: All notices hereunder shall be in writing and shall be given by personal delivery or sent by certified mail, return receipt requested, or reputable overnight courier service, postage expense prepaid, to the address of the other party as set forth herein or to any later address last known to the sender. All notices to Lessor shall be addressed to the attention of Vice President, Contracts, and must be executed by an authorized officer of Lessee to be effective. Notice shall be effective upon signed receipt or other evidence of delivery.

22. APPLICABLE LAW/ARBITRATION: The parties agree that any action brought to enforce any of the terms, or to recover for any breach, whether based in tort, contract or otherwise, relating to or arising out of this Lease (collectively, "Lease Disputes") will be submitted to the Orange County, California, office of JAMS/Endispute LLC ("JAMS"), for a trial of all issues of law and fact conducted by a retired judge or justice from the panel of JAMS, appointed pursuant to a general reference under California Code of Civil Procedure, Section 638(1) (or any amendment, addition or successor section thereto) unless Lessor or its Assignee selects an alternative forum. If the parties are unable to agree on a member of the JAMS panel, then one shall be appointed by the presiding Judge of the California Superior Court for the County of Orange. In the event that JAMS in the County of Orange ceases to exist, then the parties agree that all Lease Disputes will be filed and conducted in the appropriate court having jurisdiction in the County of Orange, unless Lessor or its Assignee selects an alternative forum. Lessee agrees to submit to the personal jurisdiction of the appropriate California Court for all Lease Disputes. Lessee waives its rights to a jury trial in any action arising out of or relating to this Lease. The prevailing party in any Lease Disputes is entitled to recover from the other party reasonable attorney's fees and costs, including all JAMS related costs and costs of collection (including judgment enforcement and collection costs). This Lease has been entered into and shall be performed in California and, therefore, this Lease shall be construed in accordance with and shall be governed by. the internal substantive laws of the State of California (exclusive of principles of conflict of laws). TIME IS OF THE ESSENCE.

23. GENERAL: Neither this Lease nor any Schedule shall hind Lessor in any manner, and no obligation of Lessor shall arise, until the respective instrument is duly executed by an authorized officer of Lessor. If more than one Lessee is named in this Lease or there is a Guarantor of this Lease, the liability of each shall be joint and several. This Lease and each Schedule shall inure to the benefit of and be binding upon Lessor, Lessee and their respective successors except as expressly provided for herein. All representations, warranties, indemnities and covenants contained herein, or in any document now or at any other time delivered in connection herewith, which by their nature would continue beyond the termination or expiration of this Lease, shall continue in full force and effect and shall survive the termination or expiration of this Lease.

24. ENTIRE AGREEMENT: THIS LEASE, TOGETHER WITH All DULY EXECUTED SCHEDULES, CONSTITUTES THE ENTIRE AGREEMENT BETWEEN LESSEE AND LESSOR WITH RESPECT TO THE EQUIPMENT AND SHALL SUPERSEDE ANY AND ALL PRIOR PROPOSALS, NEGOTIATIONS AND/OR OTHER COMMUNICATIONS. ORAL OR WRITTEN. NO MODIFICATION TO THIS AGREEMENT SHALL BE EFFECTIVE UNLESS MADE IN WRITING AND DULY EXECUTED BY LESSEE AND AN AUTHORIZED OFFICER OF LESSOR. NO ORAL OR WRITTEN GUARANTY, PROMISE. CONDITION. REPRESENTATION OR WARRANTY SHALL BE BINDING UNLESS MADE A PART OF THIS LEASE BY DULY EXECUTED ADDENDUM. UNLESS SPECIFIED OTHERWISE. IN THE EVENT ANY SUCH DULY EXECUTED MODIFICATION IS ATTACHED TO AND MADE A PART OF ANY SPECIFIC SCHEDULE. THE TERMS AND CONDITIONS OF SUCH MODIFICATION SHALL APPLY ONLY TO THAT SPECIFIC SCHEDULE. AND SHALL NOT APPLY TO ANY OTHER SCHEDULE.

PLEASE INITIAL BELOW TO CERTIFY YOUR ACKNOWLEDGMENT AND AGREEMENT THAT NO MODIFICATION TO THIS LEASE SHALL BE EFFECTIVE UNLESS IN WRITING AND SIGNED BY LESSEE AND AN AUTHORIZED OFFICER OF LESSOR.

Lessee Initials: KA **Lessor Initials: _____**

Lessee:	**Exagen Diagnostics, Inc.**	Lessor:	**CELTIC LEASING CORP.**
Signature:	/s/ Kamal Adawi	Signature:	/s/ Sarah A. Powers
Name:	Kamal Adawi	Name:	Sarah A. Powers
Title:	CFO	Title:	Vice President
Date Offered:		Date Accepted:	

CORPORATE CERTIFICATE

THE UNDERSIGNED DOES HEREBY CERTIFY that: (a) I am an officer of **Exagen Diagnostics, Inc.,** a corporation duly organized and validly existing under the laws of the state of **Delaware;** and (b) that the persons whose names and signatures appear below are, and have been at all times, duly qualified and authorized to execute, on behalf of this Corporation, any and all documents and instruments in connection with the lease, purchase, sale or other disposition of personal property from or to CELTIC LEASING CORP. including, but not limited to, Master Leases, Lease Schedules, Purchase and Sale Agreements, and other documents relating thereto.

NAME	TITLE	SIGNATURE
Kamal Adawi	CFO	/s/ Kamal Adawi

IN WITNESS WHEREOF, the undersigned officer has executed this Certificate on the date set forth below.

(AFFIX CORP. SEAL HERE)

Signature: /s/ Mark Hazeltine
(OF CERTIFYING OFFICER)
Name: Mark Hazeltine
(PRINT OR TYPE)
Title: VP of Finance
(OFFICER TITLE-PREFERABLY SECRETARY OR ASST. SEC.)
Date: FEBRUARY 1, 2018

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CELTIC

LEASE SCHEDULE No. 3861A01 ANNEXED TO AND MADE A PART OF MASTER
CELTIC LEASING CORP. — Lessor LEASE NO. CML- 3861A DATED: _____
4 PARK PLAZA. SUITE 300. IRVINE. CALIFORNIA 92614 • (949) 263-3880 • FAX: (949) 263-1331

Lessee: **Exagen Diagnostics, Inc.**

Corporate Address : 1261 Liberty Way, Vista, CA 92081

Contact : Kamal Adawi Title: CFO Phone No.

Equipment
Location: Same as above

Contact: Kamal Adawi Title: CFO Phone No.

This Schedule is issued pursuant to the Master Lease referenced above between Lessee and Lessor. All of the terms and conditions of the Master Lease are incorporated herein and made a part hereof as if such terms and conditions were set forth in this Schedule. By their execution and delivery of this Schedule, the parties hereby reaffirm all of the terms and conditions of the Master Lease.

Equipment Leased:

ITEM	QTY	SERIAL NO.	DESCRIPTION
			VENDOR(S): to be determined
1.-?	various		Items of Equipment expected to include: miscellaneous Tecan EVO 100, and/or other related and/or accessory property. Items 1, and on shall be enumerated and described in further detail, including location and vendor name, at a later date on the related applicable Acceptance Certificate(S).

NOTE: Equipment cost to Lessor not to exceed: $107,000 00

MONTHLY RENT	BASE TERM IN MONTHS	DEPOSIT APPLIED TO LAST BILLING CYCLE	BILLING CYCLE		FINAL COMMENCEMENT DATE
$2,311.00 (PLUS APPLICABLE TAXES)	48	ONE MONTH'S RENT	☐MONTHLY	☒QUARTERLY	
			☐BIANNUALLY	☐ANNUALLY	

By execution hereof, the parties hereby reaffirm their acknowledgment and agreement that no modification to this Lease shall be effective unless in writing and signed by Lessee and an authorized officer of Lessor.

OFFER		**ACCEPTANCE**	
Lessee:	**Exagen Diagnostics, Inc.**	Lessor:	CELTIC LEASING CORP.
Signature:	/s/ Kamal Adawi	Signature:	/s/ Sarah A. Powers
Name:	Kamal Adawi	Name:	Sarah A. Powers
Title:	CFO	Title:	Vice President
Date:		Date:	

LS

CELTIC COMMERCIAL FINANCE®

4 Park Plaza, Suite 300
Irvine, CA 92614

TEL.: 949.263.3880
FAX: 949.263.1331

info@celticleasing.com
www.celticleasing.com

January 19, 2018

Exagen Diagnostics, Inc.,
1261 Liberty Way,
Vista, CA 92081

RE: Lease Schedule No. 3861A01 (the "Schedule"), to Master Lease No. CML-386IA (the "Lease"), by and between Celtic Leasing Corp., as Lessor, and **Exagen Diagnostics, Inc.** as Lessee, and all duly executed supplemental documentation relating to said Lease and Schedule (collectively, the Lease, the Schedule, and all related supplemental documentation, is herein referred to as the "Transaction").

Ladies/Gentlemen:

Notwithstanding anything to the contrary contained in the above referenced Transaction, and to the limited extent hereof, this Letter Agreement amends and supersedes said Transaction and is hereby incorporated by reference therein.

Lessee has requested and Lessor has agreed that, in the event Lessee returns the Equipment subject to this Schedule in accordance with the terms of the Master Lease. Lessee shall pay to Lessor a restocking fee equal to 5% percent of the original Equipment cost.

In all other respects, the terms of the Transaction as currently set forth shall remain in full force and effect. Please acknowledge your acceptance of this Letter Agreement by your authorized signature below and return the original to Celtic Leasing Corp.

Sincerely,

CELTIC LEASING CORP.

/s/ Sarah A. Powers
Sarah A. Powers
Vice President

SAP/kg

ACKNOWLEDGED AND AGREED:

Exagen Diagnostics, Inc.

Signature: /s/ Kamal Adawi

Name: Kamal Adawi

Title: CFO

Date: _____

MISDIRECTED INVOICE/ASSIGNMENT OF INVOICE/BILL OF SALE

relating to

all Lease Schedules now or hereafter attached to and made a part of Master Lease No. CML-3861A,

by and between

CELTIC LEASING CORP., as Lessor,

and

Exagen Diagnostics, Inc., as Lessee (the "Lease")

This is to acknowledge that for all items of equipment now or hereafter subject to the above-referenced Lease Schedules (the "Equipment"), it has been and is since prior to delivery of said Equipment, the intent of Lessee to lease the Equipment from Lessor. However, certain vendor(s) may inadvertently misdirect invoicing to Lessee for the Equipment, instead of to Lessor. Any such misdirected invoice(s) will be paid by Lessor (unless clearly documented otherwise). Lessee hereby acknowledges that it is not its intention to acquire any rights, title or interest in any of the Equipment (except for those rights and interests granted under the Lease), and, therefore, for valuable consideration, receipt of which is hereby acknowledged, Lessee hereby assigns, sets over, and transfers to Lessor any and all rights, title and interest it may inadvertently acquire to the Equipment as a result of any such misdirected invoice(s). Upon payment of these misdirected invoice(s) by Lessor (and/or its Assignee), Lessee acknowledges that Lessor shall acquire free and clear title to the subject Equipment.

READ, ACKNOWLEDGED AND AGREED TO:

Lessee:	**Exagen Diagnostics, Inc.**	Lessor:	**CELTIC LEASING CORP.**
Signature:	/s/ Kamal Adawi	Signature:	/s/ Sarah A. Powers
Name:	Kamal Adawi	Name:	Sarah A. Powers
Title:	CFO	Title:	Vice President
Date:		Date:	

L:\MIBROAD00

NOTARIZATION OF SIGNATURES

RE : Celtic Master Lease No. CML-3861A

LESSEE : **Exagen Diagnostics, Inc.**

SIGNER(S) : Kamal Adawi

In regards to the above referenced transaction, Celtic Leasing Corp. requires that the below requested Lessee signature(s) be authenticated by a notary public. Please also attach photocopies of each signer's driver's license. Be sure to provide current address and phone number of each Signer.

NAME OF SIGNER : Kamal Adawi
HOME ADDRESS : 1431 PACIFIC HWY UNIT 812
San Diego, CA 92101

SIGNATURE: /s/ Kamal Adawi
PHONE:

STATE OF California
COUNTY OF San Diego SS.

On this 01 day of February, 2018, before me, personally appeared Kamal Adawi personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same in his authorized capacity, and that by his signature on the instrument the person or the entity upon behalf of which the person(s) acted, executed the instrument

WITNESS my hand and official seal.

(This area for official notarial seal)

Notary Public in and for said County and Slate

NOS

CELTIC LEASING CORP.—Lessor
4 Park Plaza. Suite 300 Irvine, California 92614 (949)263-3880 FAX: (949) 263-1331

INSURANCE AUTHORIZATION

January 18, 2018

Exagen Diagnostics, Inc.—Lessee
1261 Liberty Way
Vista. CA 92081

RE: Leased Property now or in the future subject to Celtic Master Lease No. CML-3861A (the "Agreement").

Gentlemen:

Please **type or print clearly** the following information with respect to your insurance coverage and sign below to authorize us to obtain Certificates of Insurance covering the equipment subject to the above referenced Agreement naming Celtic Leasing Corp.—and our assignee, if any—as Co-Loss Payee(s) on the Physical Damage Insurance and Additional Insured(s) on the Liability Coverage:

PROPERTY/CASUALTY:	LIABILITY:
Klein & Costa/Lockton Insurance Insurance Company/Agent	Federal Insurance Company/Lockton Insurance Insurance Company/Agent
4275 Executive Square Ste 600 Street Address	4275 Executive Square Ste 600 Street Address
La Jolla, CA 92023 City, State, Zip	La Jolla, CA 92023 City. State, Zip
Julie Werner Contact Phone Number	Julie Werner Contact Phone Number
_____ Fax Number Email Address	_____ Fax Number Email Address

Please call the undersigned at 949-263-3880, x1051, if you have any questions. Thank you for your assistance.

Sincerely,

CELTIC LEASING CORP.

/s/ Britney Brumley
Britney Brumley
Assistant Documentation Administrator

/bb

L:\IAANYDS

INSURANCE REQUEST CONFIRMED AND AUTHORIZED:

Exagen Diagnostics, Inc.

Signature: /s/ Kamal Adawi
Name: Kamal Adawi
Title: CFO
Date: 2-1-2018

Exhibit 10.32

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT (as the same may be amended, restated, modified, or supplemented from time to time, this "**Agreement**") dated as of September 7, 2017 (the "**Effective Date**") among INNOVATUS LIFE SCIENCES LENDING FUND I, LP, a Delaware limited partnership (together with its successors and assigns, "**Innovatus**"), as collateral agent (in such capacity, together with its successors and assigns in such capacity, "**Collateral Agent**"), and the Lenders listed on Schedule 1.1 hereof or otherwise a party hereto from time to time, and EXAGEN DIAGNOSTICS, INC., a Delaware corporation ("**Borrower**"), provides the terms on which the Lenders shall lend to Borrower and Borrower shall repay the Lenders. The parties agree as follows:

1. DEFINITIONS, ACCOUNTING AND OTHER TERMS

1.1 Capitalized terms used herein shall have the meanings set forth in Section 13 to the extent defined therein. All other capitalized terms used but not defined herein shall have the meaning given to such terms in the Code. Any accounting term used but not defined herein shall be construed in accordance with GAAP and all calculations shall be made in accordance with GAAP. The term "financial statements" shall include the accompanying notes and schedules. Any section, subsection, schedule or exhibit references are to this Agreement unless otherwise specified.

2. LOANS AND TERMS OF PAYMENT

2.1 Promise to Pay. Borrower hereby unconditionally promises to pay each Lender the outstanding principal amount of the Term Loan advanced to Borrower by such Lender and accrued and unpaid interest thereon and any other amounts due hereunder as and when due in accordance with this Agreement.

2.2 Term Loans.

(a) Availability. (i) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, to make a term loan to Borrower on the Effective Date in an aggregate principal amount of Twenty Million Dollars ($20,000,000.00) according to each Lender's Term A Loan Commitment as set forth on Schedule 1.1 hereto (the "**Term A Loan**"). After repayment, the Term A Loan may not be re-borrowed.

(ii) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, during the Second Draw Period, to make an additional term loan to Borrower in an aggregate amount of Five Million Dollars ($5,000,000.00) according to each Lender's Term B Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a "**Term B Loan**", and collectively as the "**Term B Loans**"; each Term A Loan or Term B Loan is hereinafter referred to singly as a "**Term Loan**" and the Term A Loans and the Term B Loans are hereinafter referred to collectively as the "**Term Loans**"). After repayment, no Term B Loan may be re-borrowed.

(b) Repayment. Borrower shall make monthly payments of interest only commencing on the second (2nd) Payment Date following the Funding Date of the Term Loan, and continuing on the Payment Date of each successive month thereafter through and including the Payment Date immediately preceding the Amortization Date. Borrower agrees to pay, on the Funding Date of the Term Loan, any initial partial monthly interest payment otherwise due for the period between the Funding Date of such Term Loan and the first Payment Date after such Funding Date. Commencing on the Amortization Date, and continuing on the Payment Date of each month thereafter, Borrower shall make consecutive equal monthly payments of principal, plus interest, in arrears, to each Lender, as calculated by Collateral Agent (which calculations shall be deemed correct absent manifest error) based upon: (1) the amount of such Lender's Term Loan, (2) the effective rate of interest, as determined in Section 2.3(a), and (3) a repayment schedule equal to (i) in the case of the Early Amortization Date being applicable, eighteen (18) months or (ii) in the case of any other Amortization Date being applicable, twenty-four (24) months. All unpaid principal and accrued and unpaid interest with respect to the Term Loan is due and payable in full on the Maturity Date. The Term Loan may only be prepaid in accordance with Sections 2.2(c) and 2.2(d).

(c) Mandatory Prepayments. If an event described in Section 7.2(c)(ii) occurs or the Term Loan is accelerated following the occurrence of an Event of Default, Borrower shall immediately pay to Lenders, payable to each Lender in accordance with its respective Pro Rata Share, an amount equal to the sum of: (i) all outstanding principal of the Term Loan plus accrued and unpaid interest thereon through the prepayment date, (ii) the Final Fee, (iii) the Prepayment Fee, plus (iv) all other Obligations that are due and payable, including, without limitation, Lenders' Expenses and interest at the Default Rate with respect to any past due amounts. Notwithstanding (but without duplication with) the foregoing, on the Maturity Date, if the Final Fee had not previously been paid in full in connection with the prepayment of the Term Loan in full, Borrower shall pay to each Lender in accordance with its respective Pro Rata Share, the Final Fee in respect of the Term Loan.

(d) Permitted Prepayment of Term Loan. From and after the first anniversary of the Effective Date only, Borrower shall have the option to prepay all or part of the Term Loan advanced by the Lenders under this Agreement, provided Borrower (i) provides written notice to Collateral Agent of its election to prepay the Term Loan at least five (5) days prior to such prepayment, (ii) in the event of a partial prepayment, prepays such part of the Term Loan in a denomination that is a whole number multiple of Five Million Dollars ($5,000,000.00), and (iii) pays to the Lenders on the date of such prepayment, payable to each Lender in accordance with its respective Pro Rata Share, an amount equal to the sum of (A) the portion of outstanding principal of the Term Loan being prepaid plus all accrued and unpaid interest thereon through the prepayment date, (B) the applicable Final Payment with respect to the portion of the Term Loan being prepaid, (C) all other Obligations that are then due and payable, including Lenders' Expenses and interest at the Default Rate with respect to any past due amounts pursuant to the terms of this Agreement, and (D) the applicable Prepayment Fee with respect to the portion of the Term Loan being prepaid. For the sake of clarity, any partial prepayment shall be applied pro-rata to all outstanding amounts under the Term Loan, and shall be applied on a pro-rata basis to all remaining payments outstanding in inverse order of maturity. Notwithstanding the foregoing, any prepayment made by Borrower after the first anniversary of the Effective Date but prior to the second anniversary of the Effective Date shall be in full and permitted solely in connection with a Permitted Prepayment Reason.

2.3 Payment of Interest on the Term Loan.

(a) Interest Rate. Subject to Section 2.3(b), the principal amount outstanding under the Term Loan shall accrue interest at a fixed per annum rate equal to eleven percent (11.00%), which interest shall be payable monthly in arrears in accordance with Sections 2.2(b) and 2.3(e); provided that two and one-half percent (2.50%) of such eleven percent (11.00%) interest rate shall be payable in-kind by adding an amount equal to such two and one- half percent (2.50%) interest to the then outstanding principal balance on a monthly basis so as to increase the outstanding principal balance of such Term Loan on each Payment Date and which amount shall be payable when the principal amount of the Term Loan is payable in accordance with Sections 2.2(b) and 2.3(e) and on which principal amount interest shall be owed pursuant to Section 2.3(a).

Interest shall accrue on the Term Loan commencing on, and including, the Funding Date of the Term Loan, and shall accrue on the principal amount outstanding under the Term Loan through and including the day on which the Term Loan is paid in full.

(b) Default Rate. Immediately upon the occurrence and during the continuance of an Event of Default, Obligations shall accrue interest at a fixed per annum rate equal to the rate that is otherwise applicable thereto plus four percentage points (4.00%) (the "**Default Rate**"). Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Collateral Agent.

(c) 365-Day Year. Interest shall be computed on the basis of a three hundred sixty-five (365) day year and the actual number of days elapsed.

(d) Debit of Accounts. Collateral Agent and each Lender may debit (or ACH) any deposit accounts designated by Borrower, maintained by Borrower for principal and interest payments or any other amounts Borrower owes the Lenders under the Loan Documents when due. Any such debits (or ACH activity) shall not constitute a set off.

(e) Payments. Except as otherwise expressly provided herein, all payments by Borrower under the Loan Documents shall be made to the respective Lender to which such payments are owed, at such Lender's office in immediately available funds on the date specified herein. Unless otherwise provided, interest is payable monthly on the Payment Date of each month. Payments of principal and/or interest received after 2:00 p.m. New York City time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment is due the next Business Day and additional fees or interest, as applicable, shall continue to accrue until paid. All payments to be made by Borrower hereunder or under any other Loan Document, including payments of principal and interest, and all fees, expenses, indemnities and reimbursements, shall be made without set-off, recoupment or counterclaim, in lawful money of the United States and in immediately available funds.

2.4 Fees. Borrower shall pay to Collateral Agent:

(a) Facility Fee. The Facility Fee, which shall be due on the Effective Date, payable solely for the account of Collateral Agent;

(b) Final Fee. The Final Fee, when due hereunder, to be shared among the Lenders in accordance with their respective Pro Rata Shares;

(c) Prepayment Fee. The Prepayment Fee, when due hereunder, to be shared among the Lenders in accordance with their respective Pro Rata Shares; and

(d) Lenders' Expenses. All Lenders' Expenses (including reasonable attorneys' fees and expenses for due diligence, investigation, documentation and negotiation of this Agreement) incurred through and after the Effective Date, when due.

2.5 Taxes.

(a) Payments Free of Taxes. Any and all payments by or on account of any obligation of Borrower under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by applicable law. If any applicable law (as determined in the good faith discretion of an applicable Withholding Agent) requires the deduction or withholding of any Tax from any such payment by a Withholding Agent, then the applicable Withholding Agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant Governmental Authority in accordance with applicable law and, if such Tax is an Indemnified Tax, then the sum payable by Borrower shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding been made.

(b) Payment of Other Taxes by Borrower. Borrower shall timely pay to the relevant Governmental Authority in accordance with applicable law, or at the option of the Lender timely reimburse it for the payment of, any Other Taxes.

(c) Indemnification by the Borrower. Borrower shall indemnify each Recipient, within 10 days after demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to the Borrower by a Lender (with a copy to the Collateral Agent), or by the Collateral Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error.

(d) Evidence of Payments. As soon as practicable after any payment of Taxes by the Borrower to a Governmental Authority pursuant to this Section 2.5, Borrower shall deliver to the Collateral Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy

of the return reporting such payment or other evidence of such payment reasonably satisfactory to the Collateral Agent.

(e) Status of Lenders.

(i) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to Borrower, at the time or times reasonably requested by Borrower, such properly completed and executed documentation reasonably requested by Borrower as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by Borrower, shall deliver such other documentation prescribed by applicable law or reasonably requested by Borrower as will enable Borrower to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender;

(ii) Without limiting the generality of the foregoing, in the event that Borrower is a U.S. Borrower;

1) any Lender that is a U.S. Person shall deliver to the Borrower on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower), executed copies of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;

2) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to Borrower (in such number of copies as shall be requested by the Recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower), whichever of the following is applicable;

i) in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed copies of IRS Form W-8BEN or W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN or W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;

ii) executed copies of IRS Form W-8ECI;

iii) in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the IRC, (x) a certificate substantially in the form of Annex- W to the effect that such Foreign Lender is not a "bank" within the meaning of Section 881(c)(3)(A) of the IRC, a "10 percent shareholder" of the Borrower within the meaning of Section 881(c)(3)(B) of the IRC, or a "controlled foreign corporation" described in Section 881(c)(3)(C) of the IRC (a "U.S. Tax Compliance Certificate") and (y) executed copies of IRS Form W-8BEN or W-8BEN-E; or

iv) to the extent a Foreign Lender is not the beneficial owner, executed copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN, W-8BEN-E, a U.S. Tax Compliance Certificate substantially in the form of Annex-X or Annex-Y, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Annex- Z on behalf of each such direct and indirect partner;

3) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Borrower (in such number of copies as shall be requested by the Recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower), executed copies of any other form prescribed by applicable law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by applicable law to permit the Borrower to determine the withholding or deduction required to be made; and

4) if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the IRC, as applicable), such Lender shall deliver to the Borrower at the time or times prescribed by law and at such time or times reasonably requested by the Borrower such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the IRC) and such additional documentation reasonably requested by the Borrower as may be necessary for the Borrower to comply with their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount to deduct and withhold from such payment. Solely for purposes of this clause (4), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

Each Lender agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify the Borrower in writing of its legal inability to do so.

(f) Survival. Each party's obligations under this Section 2.5 shall survive the resignation or replacement of the Collateral Agent or any assignment of rights by, or the replacement of, a Lender, the termination of the Commitments and the repayment, satisfaction or discharge of all obligations under any Loan Document.

2.6 Secured Promissory Notes. The Term Loan shall be evidenced by a Secured Promissory Note or Notes in the form attached as Exhibit D hereto (each a "**Secured Promissory Note**"), and shall be repayable as set forth in this Agreement. Borrower irrevocably authorizes each Lender to make or cause to be made, on or about the Funding Date of any Term Loan or at the time of receipt of any payment of principal on such Lender's Secured Promissory Note, an appropriate notation on such Lender's Secured Promissory Note Record reflecting the making of such Term Loan or (as the case may be) the receipt of such payment. Absent manifest error, the outstanding amount of each Term Loan set forth on such Lender's Secured Promissory Note Record shall be prima facie evidence of the principal amount thereof owing and unpaid to such Lender, but the failure to record, or any error in so recording, any such amount on such Lender's Secured Promissory Note Record shall not limit or otherwise affect the obligations of Borrower under any Secured Promissory Note or any other Loan Document to make payments of principal of or interest on any Secured Promissory Note when due. Upon receipt of an affidavit of an officer of a Lender, in form and substance reasonably satisfactory to Borrower as to the loss, theft, destruction, or mutilation of its Secured Promissory Note, Borrower shall issue, in lieu thereof, a replacement Secured Promissory Note in the same principal amount thereof and of like tenor.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Term Loan. Each Lender's obligation to make the Term Loan is subject to the condition precedent that Collateral Agent and each Lender shall consent to or shall have received, in form and substance satisfactory to Collateral Agent and each Lender, such documents, and completion of such other matters, as Collateral Agent and each Lender may reasonably deem necessary or appropriate, including, without limitation:

(a) original Loan Documents, each duly executed by Borrower and each Subsidiary, as applicable;

(b) a completed Perfection Certificate for Borrower and each of its Subsidiaries;

(c) duly executed original Control Agreements with respect to any Collateral Accounts maintained by Borrower or any of its Subsidiaries as required under Section 6.6;

(d) the Operating Documents and good standing certificates of Borrower and its Subsidiaries certified by the Secretary of State (or equivalent agency) of Borrower's and such Subsidiaries' jurisdiction of organization or formation and each jurisdiction in which Borrower and each Subsidiary is qualified to conduct business, each as of a date no earlier than thirty (30) days prior to the Effective Date;

(e) a copy of resolutions of the governing body for Borrower evidencing approval of the Term Loan and other transactions evidenced by the Loan Documents;

(f) duly executed original officer's certificates for Borrower and each Subsidiary that is a party to the Loan Documents certifying as to (i) the incumbency of each Responsible Officer executing each Loan Document and (ii) the documents delivered pursuant to Section 3.1(d) and 3.1(e), in a form acceptable to Collateral Agent and the Lenders;

(g) certified copies, dated as of date no earlier than thirty (30) days prior to the Effective Date, of financing statement searches, as Collateral Agent shall request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Term Loan, will be terminated or released;

(h) a duly executed legal opinion of counsel to Borrower dated as of the Effective Date;

(i) evidence satisfactory to Collateral Agent and the Lenders that the insurance policies required by Section 6.5 hereof are in full force and effect, together with appropriate evidence showing loss payable and/or additional insured clauses or endorsements in favor of Collateral Agent, for the ratable benefit of the Lenders;

(j) a copy of any applicable Investors Rights Agreement and any amendments thereto;

(k) payment of the Facility Fee and Lenders' Expenses then due as specified in Section 2.4 hereof;

(l) a landlord's consent executed in favor of Collateral Agent in respect of all of Borrower's and each Subsidiaries' leased locations;

(m) a bailee waiver executed in favor of Collateral Agent in respect of each third party bailee where Borrower or any Subsidiary maintains Collateral having a book value in excess of Two Hundred Fifty Thousand Dollars ($250,000.00);

(n) a payoff letter from CRP in respect of the Existing Indebtedness; and

(o) evidence that (i) the Liens securing the Existing Indebtedness will be terminated and (ii) the documents and/or filings evidencing the perfection of such Liens, including without limitation any financing statements and/or control agreements, have or will, concurrently with the initial Credit Extension, be terminated.

3.2 Conditions Precedent to all Term Loans. The obligation of each Lender to extend each Term Loan, including the initial Term Loan, is subject to the following conditions precedent:

(a) receipt by Collateral Agent of (i) an executed Loan Payment Request Form in the form of Exhibit B-1 attached hereto and (ii) an executed Disbursement Letter in the form of Exhibit B-2 attached hereto;

(b) the representations and warranties in Section 5 hereof shall be true, accurate and complete in all material respects on the date of each Loan Payment Request Form and the date of each Disbursement Letter and the Funding Date of each Term Loan; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text

thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, and no Event of Default shall have occurred and be continuing or result from the funding of such Term Loan;

(c) in such Lender's reasonable discretion, there has not been any Material Adverse Change;

(d) no Event of Default or an event that with the passage of time could result in an Event of Default, shall exist;

(e) to the extent not delivered at the Effective Date, duly executed original Secured Promissory Notes and Warrants, in number, form and content acceptable to each Lender, and in favor of each Lender according to its Commitment Percentage, with respect to each Credit Extension made by such Lender after the Effective Date; and

(f) payment of the fees and Lenders' Expenses then due as specified in Section 2.5 hereof.

3.3 Intentionally Omitted.

3.4 Covenant to Deliver. Borrower agrees to deliver to Collateral Agent and the Lenders each item required to be delivered to Collateral Agent under this Agreement as a condition precedent to any Term Loan. Borrower expressly agrees that the Term Loan made prior to the receipt by Collateral Agent or any Lender of any such item shall not constitute a waiver by Collateral Agent or any Lender of Borrower's obligation to deliver such item, and any such Term Loan in the absence of a required item shall be made in each Lender's sole discretion.

3.5 Procedures for Borrowing. Subject to the prior satisfaction of all other applicable conditions to the making of the Term Loan set forth in this Agreement, to obtain the Term Loan (other than the Term Loan funded on the Effective Date), Borrower shall notify the Lenders (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 2:00 p.m. New York City time twelve (12) Business Days prior to the date the Term Loan is to be made. Together with any such electronic, facsimile or telephonic notification, Borrower shall deliver to Collateral Agent by electronic mail or facsimile a completed Disbursement Letter and Loan Payment Request Form executed by a Responsible Officer or his or her designee. The Collateral Agent may rely on any telephone notice given by a person whom Collateral Agent reasonably believes is a Responsible Officer or designee.

4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Borrower hereby grants Collateral Agent, for the ratable benefit of the Lenders, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Collateral Agent, for the ratable benefit of the Lenders, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof. If Borrower shall acquire a commercial tort claim (as defined in the Code) in an amount equal to or greater than One Hundred Thousand Dollars ($100,000.00), Borrower shall grant to Collateral Agent, for the ratable benefit of the Lenders, a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Collateral Agent.

If this Agreement is terminated, Collateral Agent's Lien in the Collateral shall continue until the Obligations (other than inchoate indemnity obligations) are repaid in full in cash. Upon payment in full in cash of the Obligations (other than inchoate indemnity obligations) and at such time as the Lenders' obligation to extend the Term Loan has terminated, Collateral Agent shall, at the sole cost and expense of Borrower, release its Liens in the Collateral and all rights therein shall revert to Borrower.

4.2 Authorization to File Financing Statements. Borrower hereby authorizes Collateral Agent to file financing statements or take any other action required to perfect Collateral Agent's security interests in the Collateral, without notice to Borrower, with all appropriate jurisdictions to perfect or protect Collateral Agent's interest or rights under the Loan Documents.

5. REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants to Collateral Agent and the Lenders as follows:

5.1 Due Organization, Authorization: Power and Authority. Borrower and each of its Subsidiaries is duly existing and in good standing as a Registered Organization in its jurisdictions of organization or formation and Borrower and each of its Subsidiaries is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its businesses or its ownership of property requires that it be qualified except where the failure to do so could not reasonably be expected to have a Material Adverse Change. In connection with this Agreement, Borrower and each of its Subsidiaries has delivered to Collateral Agent a completed perfection certificate and any updates or supplements thereto on or before the Effective Date (each a "**Perfection Certificate**" and collectively, the "**Perfection Certificates**"). Borrower represents and warrants that all the information set forth on the Perfection Certificates pertaining to Borrower and each of its Subsidiaries is accurate and complete in all material respects as of the date delivered or supplemented (to the extent permitted hereunder).

The execution, delivery and performance by Borrower and each of its Subsidiaries of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with any of Borrower's or such Subsidiaries' organizational documents, including its respective Operating Documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law applicable thereto, (iii) contravene, conflict or violate any material applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or such Subsidiary, or any of their property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect or any action or filing that is immaterial to Borrower's business) or are being obtained pursuant to Section 6.1(b), or (v) constitute an event of default under any material agreement by which Borrower or any of such Subsidiaries, or their respective properties, is bound. Neither Borrower nor any of its Subsidiaries is in default under any agreement to which it is a party or by which it or any of its assets is bound in which such default could reasonably be expected to have a Material Adverse Change.

5.2 Collateral.

(a) Borrower and each its Subsidiaries have good title to, have rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien under the Loan Documents, free and clear of any and all Liens except Permitted Liens, and neither Borrower nor any of its Subsidiaries have any Deposit Accounts, Securities Accounts, Commodity Accounts or other investment accounts other than the Collateral Accounts or the other investment accounts, if any, described in the Perfection Certificates delivered to Collateral Agent in connection herewith or as permitted otherwise under this Agreement with respect of which Borrower or such Subsidiary has given Collateral Agent notice and taken such actions as are necessary to give Collateral Agent a perfected security interest therein as required under this Agreement.

(b) The security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral, subject only to Permitted Liens under clauses (c), (d), (e), (f) and (h) of the definition of "Permitted Liens".

(c) On the Effective Date, and except as disclosed on the Perfection Certificate (i) the Collateral is not in the possession of any third party bailee, and (ii) no such third party bailee possesses components of the Collateral in excess of Fifty Thousand Dollars ($50,000.00).

(d) All Inventory and Equipment is in all material respects of good and marketable quality, free from material defects.

(e) Borrower and each of its Subsidiaries is the sole owner of the Intellectual Property each respectively purports to own necessary for its operations other than licenses permitted hereunder, free and clear of all Liens other than Permitted Liens. Except as noted on the Perfection Certificates or as otherwise disclosed in

writing to Collateral Agent, neither Borrower nor any of its Subsidiaries is a party to, nor is bound by, any material license or other Material Agreement.

5.3 Litigation. Except as disclosed on the Perfection Certificate or for which notice has been provided by Borrower as required under this Agreement, there are no actions, suits, investigations, or proceedings pending or, to the Knowledge of the Responsible Officers, threatened in writing by or against Borrower or any of its Subsidiaries involving more than Two Hundred Fifty Thousand Dollars ($250,000.00) or a claim for infringement of any owned Intellectual Property. Except as disclosed on the Perfection Certificate or for which notice has been provided by Borrower as required under this Agreement, there are no actions, suits, investigations or proceedings pending or, to the Knowledge of the Responsible Officers, threatened in writing by or against Borrower or any Subsidiaries involving challenges to the validity of any material Intellectual Property of Borrower or any Subsidiary.

5.4 No Material Adverse Change; Financial Statements. All consolidated financial statements for Borrower and its Subsidiaries, delivered to Collateral Agent fairly present, in conformity with GAAP, in all material respects the consolidated financial condition of Borrower and its Subsidiaries, and the consolidated results of operations of Borrower and its Subsidiaries. Since the date of the most recent financial statements submitted to Collateral Agent and Innovatus, there has not been a Material Adverse Change.

5.5 Solvency. Borrower and each of its Subsidiaries, when taken as a whole, is Solvent.

5.6 Regulatory Compliance. Neither Borrower nor any of its Subsidiaries is an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Neither Borrower nor any of its Subsidiaries is engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower and each of its Subsidiaries has complied in all material respects with the Federal Fair Labor Standards Act. Neither Borrower nor any of its Subsidiaries is a "holding company" or an "affiliate" of a "holding company" or a "subsidiary company" of a "holding company" as each term is defined and used in the Public Utility Holding Company Act of 2005. Neither Borrower nor any of its Subsidiaries has violated any laws, ordinances or rules, the violation of which could reasonably be expected to have a Material Adverse Change. Neither Borrower's nor any of its Subsidiaries' properties or assets has been used by Borrower or such Subsidiary or, to Borrower's Knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than in material compliance with applicable laws. Borrower and each of its Subsidiaries has obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Governmental Authorities that are necessary to continue their respective businesses as currently conducted.

None of Borrower, any of its Subsidiaries, or any of Borrower's or its Subsidiaries' controlled Affiliates or any of their respective agents acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement is (i) in violation of any Anti-Terrorism Law, (ii) engaging in or conspiring to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding or attempts to violate, any of the prohibitions set forth in any Anti-Terrorism Law, or (iii) is a Blocked Person. None of Borrower, any of its Subsidiaries, or to the Knowledge of Borrower, any of their Affiliates or agents, acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement, (x) conducts any business or engages in making or receiving any contribution of funds, goods or services to or for the benefit of any Blocked Person, or (y) deals in, or otherwise engages in any transaction relating to, any property or interest in property blocked pursuant to Executive Order No. 13224, any similar executive order or other Anti-Terrorism Law.

5.7 Investments. Neither Borrower nor any of its Subsidiaries owns any stock, shares, partnership interests or other equity securities except for Permitted Investments.

5.8 Tax Returns and Payments; Pension Contributions. Borrower and each of its Subsidiaries has timely filed all required tax returns and reports, and Borrower and each of its Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower and such Subsidiaries in an amount greater than One Hundred Thousand Dollars ($100,000.00), in all jurisdictions in which Borrower or any such Subsidiary is subject to taxes, including the United States, unless such taxes are being contested in accordance with the next sentence. Borrower and each of its Subsidiaries may defer payment of any contested taxes, provided that Borrower or such Subsidiary in good faith contests its obligation to pay the taxes by

appropriate proceedings promptly and diligently instituted and conducted. Neither Borrower nor any of its Subsidiaries is aware of any claims or adjustments proposed for any of Borrower's or such Subsidiaries' prior tax years which could result in additional taxes becoming due and payable by Borrower or its Subsidiaries in an amount greater than One Hundred Thousand Dollars ($100,000.00). Borrower and each of its Subsidiaries have paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their material terms, and neither Borrower nor any of its Subsidiaries have, withdrawn from participation in, and have not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any material liability of Borrower or its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

5.9 Use of Proceeds. Subject to the next sentence, Borrower shall use the proceeds of the Term Loan solely as working capital and to fund its general business requirements in accordance with the provisions of this Agreement, and not for personal, family, household or agricultural purposes. A portion of the proceeds of the Term A Loans shall be used by Borrower to repay the Existing Indebtedness in full on the Effective Date.

5.10 Full Disclosure. No written representation, warranty or other statement of Borrower or any of its Subsidiaries in any certificate or written statement given to Collateral Agent or any Lender, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given to Collateral Agent or any Lender, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not materially misleading (it being recognized that projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

6. AFFIRMATIVE COVENANTS

Borrower shall, and shall cause each of its Subsidiaries to, do all of the following:

6.1 Government Compliance.

(a) Maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of organization and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Change. Comply with all laws, ordinances and regulations to which Borrower or any of its Subsidiaries is subject, the noncompliance with which could reasonably be expected to have a Material Adverse Change.

(b) Obtain and keep in full force and effect, all of the material Governmental Approvals necessary for the performance by Borrower and its Subsidiaries of their respective businesses and obligations under the Loan Documents and the grant of a security interest to Collateral Agent for the ratable benefit of the Lenders, in all of the Collateral.

6.2 Financial Statements, Reports, Certificates; Notices.

(a) Deliver to Collateral Agent and Innovatus:

(i) as soon as available, but no later than forty-five (45) days after the last day of each quarter, a company prepared consolidated and consolidating balance sheet, income statement and cash flow statement covering the consolidated operations of Borrower and its Subsidiaries for such quarter certified by a Responsible Officer and in a form reasonably acceptable to Collateral Agent;

(ii) as soon as available, but no later than one hundred fifty (150) days after the last day of Borrower's fiscal year or within five (5) days of filing with the Securities and Exchange Commission, audited consolidated financial statements prepared under GAAP, consistently applied, together with an unqualified opinion (including no "going concern" or like qualification or exception or any qualification or exception as to the scope of

such audit) on the financial statements from an independent certified public accounting firm acceptable to Collateral Agent in its reasonable discretion; provided that if Borrower is issued an audit with a "going concern" or similar limitation solely in connection with its liquidity, such audit shall not constitute an Event of Default under any Loan Document if the Borrower demonstrates that it is cash flow positive for the trailing six (6) months from the date such audit was delivered to Innovatus within six (6) months from the date such audit was delivered (i.e. 330 days from the last day of the Borrower's fiscal year), subject to calculations and evidence reasonably acceptable to Innovatus;

(iii) as soon as available after approval thereof by Borrower's board of directors, but no later than the earlier of ten (10) days after such approval and forty-five (45) days after the last day of Borrower's fiscal year, and within twenty (20) days following any Equity Cure, Borrower's annual (A) financial projections and (B) budget, in each case, for the entire current fiscal year as approved by Borrower's board of directors; provided that, any revisions to such projections and/or budget approved by Borrower's board of directors shall be delivered to Collateral Agent and the Lenders no later than seven (7) days after such approval);

(iv) within five (5) days of delivery, copies of all non-ministerial statements, reports and notices made generally available to Borrower's security holders or holders of Subordinated Debt;

(v) in the event that Borrower becomes subject to the reporting requirements under the Securities Exchange Act of 1934, as amended, within five (5) days of filing, all reports on Form 10-K, 10-Q and 8-K filed with the Securities and Exchange Commission;

(vi) along with the delivery of the financial statements under Section 6.2(a)(i), any material amendments of or other material changes to the capitalization table of Borrower and to the Operating Documents of Borrower or any of its Subsidiaries, together with any copies reflecting such amendments or changes with respect thereto;

(vii) as soon as available, but no later than thirty (30) days after the last day of each month, copies of the month-end account statements for each Collateral Account maintained by Borrower or its Subsidiaries, which statements may be provided to Collateral Agent and Innovatus by Borrower or directly from the applicable institution(s);

(viii) prompt delivery of (and in any event within five (5) days after the same are sent or received) copies of all material correspondence, reports, documents and other filings with any Governmental Authority that could reasonably be expected to have a material adverse effect on any of the Governmental Approvals material to Borrower's business or otherwise could reasonably be expected to have a Material Adverse Change;

(ix) prompt notice of any event that (A) could reasonably be expected to materially and adversely affect the Borrower's Intellectual Property and (B) could reasonably be expected to result in a Material Adverse Change;

(x) written notice substantially contemporaneously with Borrower's creation of a New Subsidiary in accordance with the terms of Section 6.10;

(xi) written notice at least twenty (20) days prior to Borrower's (A) adding any new offices or business locations, including warehouses (unless such new offices or business locations contain less than Five Hundred Thousand Dollars ($500,000.00) in assets or property of Borrower or any of its Subsidiaries), (B) changing its jurisdiction of organization, (C) changing its organizational structure or type, (D) changing its legal name, or (E) changing any organizational number (if any) assigned by its jurisdiction of organization;

(xii) upon Borrower becoming aware of the existence of any Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default, prompt (and in any event within three (3) Business Days) written notice of such occurrence, which such notice shall include a reasonably detailed description of such Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default;

(xiii) immediate notice if Borrower or such Subsidiary has Knowledge that Borrower, or any Subsidiary or Controlled Affiliate of Borrower, is listed on the OFAC Lists or (a) is convicted on, (b) pleads *nolo contendere* to, (c) is indicted on, or (d) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering;

(xiv) prompt notice of any commercial tort claim in an amount equal to or greater than One Hundred Thousand Dollars ($100,000.00) and of the general details thereof;

(xv) if Borrower or any of its Subsidiaries is not now a Registered Organization but later becomes one, written notice of such occurrence and information regarding such Person's organizational identification number within seven (7) Business Days of receiving such organizational identification number; and

(xvi) other information as reasonably requested by Collateral Agent or any Lender.

Notwithstanding the foregoing, documents required to be delivered pursuant to the terms hereof, to the extent any such documents are included in materials otherwise filed with the Securities and Exchange Commission, such documents or materials may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower posts such documents, or provides a link thereto, on Borrower's website on the internet at Borrower's website address.

(b) Concurrently with the delivery of the financial statements specified in Section 6.2(a)(i) above but no later than forty-five (45) days after the last day of each quarter, except as otherwise indicated, deliver to Collateral Agent and Innovatus:

(i) a duly completed Compliance Certificate signed by a Responsible Officer;

(ii) an updated Perfection Certificate to reflect any material amendments, modifications and updates to certain information in the Perfection Certificate after the Effective Date, as and when such amendments, modifications or updates are necessitated by material events or conditions, but not less frequently than on each anniversary of the Effective Date; in each case, subject to the terms of this Agreement;

(iii) copies of any material Governmental Approvals obtained by Borrower or any of its Subsidiaries;

(iv) written notice of the commencement of, and any material development in, the proceedings contemplated by Section 5.8 hereof;

(v) written notice of any litigation or governmental proceedings pending or threatened (in writing) against Borrower or any of its Subsidiaries, which could reasonably be expected to result in damages or costs to Borrower or any of its Subsidiaries of more than Two Hundred Fifty Thousand Dollars ($250,000.00); and

(vi) written notice of all returns, recoveries, disputes and claims regarding Inventory that involve more than Five Hundred Thousand Dollars ($500,000.00) individually or in the aggregate in any calendar year.

(c) Keep proper, complete and true books of record and account in accordance with GAAP in all material respects. Borrower shall, and shall cause each of its Subsidiaries to, allow, at the sole cost of Borrower, Collateral Agent or any Lender, during regular business hours upon reasonable prior notice (provided that no notice shall be required when an Event of Default has occurred and is continuing), to visit and inspect any of its properties, to examine and make abstracts or copies from any of its books and records, and to conduct a collateral audit and analysis of its operations and the Collateral. Such audits shall be conducted no more often than once every year unless (and may be more frequently if) an Event of Default has occurred and is continuing. Notwithstanding the foregoing, upon request of Collateral Agent and/or Innovatus, Borrower agrees to permit Collateral Agent and Innovatus to communicate with Borrower's accounting firm with respect to the consolidated financial statements

delivered pursuant to this Section 6.2 in the presence of Borrower and to the extent the accounting firm agrees to such communications.

6.3 Inventory; Returns. Keep all Inventory in good and marketable condition, free from material defects. Returns and allowances between Borrower, or any of its Subsidiaries, and their respective Account Debtors shall follow Borrower's, or such Subsidiary's, customary practices as they exist at the Effective Date.

6.4 Taxes; Pensions. Timely file and require each of its Subsidiaries to timely file, all required tax returns and reports and timely pay, and require each of its Subsidiaries to timely pay, all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower or its Subsidiaries, except as otherwise permitted pursuant to the terms of Section 5.8 hereof, and shall deliver to Collateral Agent and Innovatus, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with the terms of such plans.

6.5 Insurance. Keep Borrower's and its Subsidiaries' business and the Collateral insured for risks and in amounts standard for companies in Borrower's and its Subsidiaries' industry and location and as Collateral Agent may reasonably request, including, but not limited to, D&O insurance reasonably satisfactory to Collateral Agent. Insurance policies shall be in a form, with companies, and in amounts that are reasonably satisfactory to Collateral Agent and Lenders. All property policies shall have a lender's loss payable endorsement showing Collateral Agent as lender loss payee, and all liability policies shall show, or have endorsements showing, Collateral Agent, as additional insured. The Collateral Agent shall be named as lender loss payee and/or additional insured with respect to any such insurance providing coverage in respect of any Collateral, and each provider of any such insurance shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to the Collateral Agent (or Borrower, in the event such provider cannot or will not do so), that it will give the Collateral Agent thirty (30) days' prior written notice before any such policy or policies shall be materially altered or canceled (other than cancellation for non-payment of premiums, for which ten (10) days' prior written notice shall be required). At Collateral Agent's request, Borrower shall deliver certified copies of policies and evidence of all premium payments. Proceeds payable under any policy shall, at Collateral Agent's option, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. Notwithstanding the foregoing, (a) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any casualty policy within 90 days of receipt thereof up to Two Hundred Fifty Thousand Dollars ($250,000.00) with respect to any loss, but not exceeding Five Hundred Thousand Dollars ($500,000.00), in the aggregate for all losses under all casualty policies in any one year, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Collateral Agent has been granted a first priority security interest, and (b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such casualty policy shall, at the option of Collateral Agent, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. If Borrower or any of its Subsidiaries fails to obtain insurance as required under this Section 6.5 or to pay any amount or furnish any required proof of payment to third persons, Collateral Agent and/or any Lender may make (but has no obligation to do so), at Borrower's expense, all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies Collateral Agent or such Lender deems prudent.

6.6 Operating Accounts.

(a) Borrower shall provide Collateral Agent five (5) Business Days' prior written notice before Borrower or any of its Subsidiaries establishes any Collateral Account. In addition, for each Collateral Account that Borrower or any of its Subsidiaries at any time maintains, Borrower or such Subsidiary shall cause the applicable bank or financial institution at or with which such Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Collateral Agent's Lien in such Collateral Account in accordance with the terms hereunder prior to the establishment of such Collateral Account, which Control Agreement may not be terminated without prior written consent of Collateral Agent. The provisions of the previous sentence shall not apply to deposit accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's, or any of its Subsidiaries', employees and identified to Collateral Agent by Borrower as such in the Perfection Certificate.

(b) Neither Borrower nor any of its Subsidiaries shall maintain any Collateral Accounts except Collateral Accounts maintained in accordance with Section 6.6.

6.7 Protection of Intellectual Property Rights. Borrower and each of its Subsidiaries shall: (a) protect, defend and maintain the validity and enforceability of its Intellectual Property that is material to its business; (b) promptly advise Collateral Agent in writing of a challenge to the validity, or material infringement by a third party of its Intellectual Property; and (c) not allow any Intellectual Property material to its business to be abandoned, forfeited or dedicated to the public without Collateral Agent's prior written consent. If Borrower or any of its Subsidiaries (i) obtains any patent, registered trademark or servicemark, registered copyright, registered mask work, or any pending application for any of the foregoing, whether as owner, licensee or otherwise, or (ii) applies for any patent or the registration of any trademark or servicemark, then Borrower or such Subsidiary shall promptly provide written notice thereof to Collateral Agent and shall execute such intellectual property security agreements and other documents and take such other actions as Collateral Agent shall reasonably request in its good faith business judgment to perfect and maintain a first priority perfected security interest in favor of Collateral Agent, for the ratable benefit of the Lenders, in such property. If Borrower or any of its Subsidiaries decides to register any copyrights or mask works in the United States Copyright Office, Borrower or such Subsidiary shall: (x) execute an intellectual property security agreement and such other documents and take such other actions as Collateral Agent may reasonably request in its good faith business judgment to perfect and maintain a first priority perfected security interest in favor of Collateral Agent, for the ratable benefit of the Lenders, in the copyrights or mask works intended to be registered with the United States Copyright Office; and (y) record such intellectual property security agreement with the United States Copyright Office. Borrower or such Subsidiary shall promptly provide to Collateral Agent and each Lender with evidence of the recording of such intellectual property security agreement.

6.8 Litigation Cooperation. Commencing on the Effective Date and continuing through the termination of this Agreement, make available to Collateral Agent and the Lenders, without expense to Collateral Agent or the Lenders, Borrower and each of Borrower's officers, employees and agents and Borrower's Books, to the extent that Collateral Agent or any Lender may reasonably deem them necessary to prosecute or defend any third-party suit or proceeding instituted by or against Collateral Agent or any Lender with respect to any Collateral or relating to Borrower.

6.9 Landlord Waivers; Bailee Waivers. In the event that Borrower or any of its Subsidiaries, after the Effective Date, intends to add any new offices or business locations, including warehouses, or otherwise store any portion of the Collateral with, or deliver any portion of the Collateral to, a bailee, in each case pursuant to Section 7.2, then Borrower or such Subsidiary will first receive the written consent of Collateral Agent and, in the event that the Collateral at any new location is valued in excess of Five Hundred Thousand Dollars ($500,000.00) in the aggregate, at Collateral Agent's election, such bailee or landlord, as applicable, shall execute and deliver a bailee waiver or landlord waiver, as applicable, in form and substance reasonably satisfactory to Collateral Agent prior to the addition of any new offices or business locations, or any such storage with or delivery to any such bailee, as the case may be.

6.10 Creation/Acquisition of Subsidiaries. In the event any Borrower or any Subsidiary of any Borrower creates or acquires any Subsidiary after the Effective Date, Borrower or such Subsidiary shall promptly notify Collateral Agent of such creation or acquisition, and Borrower or such Subsidiary shall take all actions reasonably requested by Collateral Agent to achieve any of the following with respect to such "**New Subsidiary**" (defined as a Subsidiary formed after the date hereof during the term of this Agreement): (i) to cause such New Subsidiary to become either a co-Borrower hereunder or a secured guarantor with respect to the Obligations, in each case if such New Subsidiary is organized under the laws of the United States; and (ii) to grant and pledge to Collateral Agent a perfected security interest in the Shares of such New Subsidiary.

6.11 Minimum Liquidity. Borrower shall at all times maintain minimum unrestricted cash and Cash Equivalents, in an account subject to a control agreement in favor of Collateral Agent, in an amount equal to (x) if the Interest-Only Milestones are met, (i) Three Million Dollars ($3,000,000.00) from the Effective Date through June 30, 2018, and (ii) Two Million Dollars ($2,000,000) at all times thereafter; and (y) in the event the Interest- Only Milestones are not met, Borrower's trailing four (4) months' cash used to fund operating activities.

6.12 Royalty Pharma Payments. Borrower shall make or cause to be made each regularly scheduled royalty payment owing from Borrower to Royalty Pharma and provide confirmation of such payment to Collateral Agent with each Compliance Certificate delivered in accordance with this Agreement.

6.13 License Transaction; Allegheny-Singer. Borrower shall use commercially reasonable efforts to enter into on commercially reasonable terms, and delivery written evidence thereof to Collateral Agent, by no later than March 7, 2018, of an exclusive license (or similar arrangement), between Borrower and Allegheny-Singer Research Institute, with respect to U.S. Pat. No. 9,495,517 and U.S. Patent Application No. 15/264,516.

6.14 Further Assurances. Execute any further instruments and take further action as Collateral Agent reasonably requests to perfect or continue Collateral Agent's Lien in the Collateral or to effect the purposes of this Agreement.

7. NEGATIVE COVENANTS

Borrower shall not, and shall not permit any of its Subsidiaries to, do any of the following without the prior written consent of the Required Lenders:

7.1 Dispositions. Convey, sell, lease, transfer, assign, dispose of (collectively, "**Transfer**"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property (including Intellectual Property), except for Transfers (a) of Inventory in the ordinary course of business; (b) of worn-out or obsolete Equipment; (c) in connection with Permitted Liens, Permitted Investments and Permitted Indebtedness; (d) of Cash or Cash Equivalents pursuant to transactions not prohibited hereunder in the ordinary course of business and approved by Borrower's board of directors, provided that any such Transfer greater than One Million Dollars ($1,000,000) shall be consistent with the then-applicable Annual Projections; and (e) other Transfers not to exceed Five Hundred Thousand Dollars ($500,000.00) in each fiscal year.

7.2 Changes in Business, Management, Ownership, or Business Locations. (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses engaged in by Borrower as of the Effective Date or reasonably related thereto; (b) liquidate or dissolve; or (c) (i) any Key Person shall cease to be actively engaged in the management of Borrower unless written notice thereof is provided to Collateral Agent and Innovatus within ten (10) days after such occurrence, or (ii) enter into any transaction or series of related transactions in which (A) the stockholders of Borrower who were not stockholders immediately prior to the first such transaction own more than forty-nine percent (49.00%) of the voting stock of Borrower immediately after giving effect to such transaction or related series of such transactions (other than by the sale of Borrower's equity securities in a public offering, a private placement of public equity or to venture capital investors so long as Borrower identifies to Collateral Agent the venture capital or private equity investors prior to the closing of such transaction or series of related transactions); and (B) Borrower ceases to own one hundred percent (100.00%) of the ownership interests of a Subsidiary of Borrower. Borrower shall not, without at least twenty (20) days' prior written notice to Collateral Agent: (A) add any new offices or business locations, including warehouses (unless such new offices or business locations contain less than Five Hundred Thousand Dollars ($500,000.00) (measured by book value) in assets or property; provided that a customer or vendor location where Collateral is held or is in transit shall not be considered a business location of Borrower for purposes of this section; provided, further that any customer and vendor locations shall be subject to Section 5.2(b) above, of Borrower or any of its Subsidiaries); (B) change its jurisdiction of organization, (C) change its organizational structure or type, (D) change its legal name, or (E) change any organizational number (if any) assigned by its jurisdiction of organization.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock, shares or property of another Person, except where (a) total consideration including cash and the value of any non-cash consideration for all such transactions does not in the aggregate exceed Five Million Dollars ($5,000,000.00) in any fiscal year of Borrower; provided that (x) all cash consideration shall be proceeds of contemporaneous sales or issuances of Borrowers Subordinated Debt or equity securities; and (y) any incremental cash burn attributable to the transaction(s) must be funded from the proceeds of the sale and issuance of Borrower's equity securities; (b) no Event of Default has occurred and is continuing or would exist after giving effect to the transactions; (c) Borrower is the surviving legal entity; and (d) no less than thirty (30) days prior to the

consummation of any such transaction, Borrower and Collateral Agent shall agree on a pro forma financial model for the Borrower on a post-transaction basis (such model to demonstrate, among other things, that, except as set forth in (a)(y) above, each transaction is cash-flow accretive to Borrower for the balance of the term of this Agreement). A Subsidiary may merge or consolidate into another Subsidiary (provided such surviving Subsidiary is a "co-Borrower" hereunder or has provided a secured Guaranty of Borrower's Obligations hereunder) or with (or into) Borrower provided Borrower is the surviving legal entity, and as long as no Event of Default is occurring prior thereto or arises as a result therefrom.

7.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, or permit any Subsidiary to do so, other than Permitted Indebtedness.

7.5 Encumbrance. Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except for Permitted Liens, or permit any Collateral not to be subject to the first priority security interest granted herein (except for Permitted Liens), or enter into any agreement, document, instrument or other arrangement (except with or in favor of Collateral Agent, for the ratable benefit of the Lenders) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower, or any of its Subsidiaries, from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or such Subsidiary's Intellectual Property, except as is otherwise permitted in Section 7.1 hereof and the definition of "Permitted Liens".

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 6.6 hereof.

7.7 Restricted Payments. Pay any dividends (other than dividends payable solely in capital stock) or make any distribution or payment in respect of or redeem, retire or purchase any capital stock (other than (i) repurchases pursuant to the terms of employee stock purchase plans, employee restricted stock agreements, stockholder rights plans, director or consultant stock option plans, or similar plans, provided such repurchases do not exceed Two Hundred Fifty Thousand Dollars ($250,000.00) in the aggregate per fiscal year or (ii) any repurchases solely from the proceeds of a simultaneous equity issuance not prohibited hereunder).

7.8 Investments. Directly or indirectly make, or permit any Subsidiary to make, any Investment other than Permitted Investments.

7.9 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower or any of its Subsidiaries, except for (a) transactions that are in the ordinary course of Borrower's or such Subsidiary's business, upon fair and reasonable terms that are no less favorable to Borrower or such Subsidiary than would be obtained in an arm's length transaction with a non-affiliated Person, (b) equity investments or Subordinated Debt by Borrower's investors in Borrower or its Subsidiaries, and (c) compensation arrangements entered into in the ordinary course of business.

7.10 Subordinated Debt. (a) Make or permit any payment on any Subordinated Debt, except under the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject, or (b) amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof or adversely affect the subordination thereof to Obligations owed to the Lenders.

7.11 Compliance. Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Term Loan for that purpose; fail to meet the minimum funding requirements of ERISA, permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the failure to comply or violation could reasonably be expected to have a Material Adverse Change, or permit any of its Subsidiaries to do so; withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of Borrower or any of its

Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

7.12 Compliance with Anti-Terrorism Laws. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit any controlled Affiliate to, directly or indirectly, knowingly enter into any documents, instruments, agreements or contracts with any Person listed on the OFAC Lists. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries, permit any Affiliate to, directly or indirectly, (i) conduct any business or engage in any transaction or dealing with any Blocked Person, including, without limitation, the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (ii) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224 or any similar executive order or other Anti-Terrorism Law, or (iii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in Executive Order No. 13224 or other Anti-Terrorism Law.

8. EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an "**Event of Default**") under this Agreement:

8.1 Payment Default. Borrower fails to (a) make any payment of principal or interest on any Term Loan on its due date, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day grace period shall not apply to payments due on the Maturity Date or the date of acceleration pursuant to Section 9.1 (a) hereof);

8.2 Covenant Default.

(a) Borrower or any of its Subsidiaries fails or neglects to perform any obligation in Sections 6.2 (Financial Statements, Reports, Certificates), 6.4 (Taxes), 6.5 (Insurance), 6.6 (Operating Accounts), 6.7 (Protection of Intellectual Property Rights), 6.11 (Minimum Liquidity) or Borrower violates any provision in Section 7; or

(b) Borrower, or any of its Subsidiaries, fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within fifteen (15) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the fifteen (15) day period or cannot after diligent attempts by Borrower be cured within such fifteen (15) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Term Loan shall be made during such cure period);

8.3 Material Adverse Change. A Material Adverse Change has occurred;

8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or any of its Subsidiaries or of any entity under control of Borrower or its Subsidiaries on deposit with any institution at which Borrower or any of its Subsidiaries maintains a Collateral Account, or (ii) a notice of lien, levy, or assessment is filed against Borrower or any of its Subsidiaries or their respective assets by any government agency, and the same under subclauses (i) and (ii) hereof are not, within twenty (20) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); and

(b) (i) any material portion of Borrower's or any of its Subsidiaries' assets is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents Borrower or any of its Subsidiaries from conducting any material part of its business;

8.5 Insolvency. (a) Borrower or any of its Subsidiaries is or becomes Insolvent; (b) Borrower or any of its Subsidiaries begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower or any of its Subsidiaries and not dismissed or stayed within forty-five (45) days (but no Term Loan shall be extended while Borrower or any Subsidiary is Insolvent and/or until any Insolvency Proceeding is dismissed);

8.6 Other Agreements. There is a default in any agreement to which Borrower or any of its Subsidiaries is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of Five Hundred Fifty Thousand Dollars ($500,000.00) or that could reasonably be expected to have a Material Adverse Change;

8.7 Judgments. (a) One or more judgments, orders, or decrees for the payment of money in an amount, individually or in the aggregate, of at least Five Hundred Thousand Dollars ($500,000.00) (not covered by independent third-party insurance) shall be rendered against Borrower or any of its Subsidiaries and shall remain unsatisfied, unvacated, or unstayed for a period of twenty (20) days after the entry thereof or (b) any judgments, orders or decrees rendered against Borrower that could reasonably be expected to result in a Material Adverse Change;

8.8 Misrepresentations. Borrower or any of its Subsidiaries or any Person acting for Borrower or any of its Subsidiaries makes any representation, warranty, or other statement, taken as a whole, now or later in this Agreement, any Loan Document or in any writing delivered to Collateral Agent and/or Lenders or to induce Collateral Agent and/or the Lenders to enter this Agreement or any Loan Document, and such representation, warranty, or other statement, when taken as a whole, is incorrect in any material respect when made;

8.9 Subordinated Debt. A default or breach occurs under any agreement between Borrower or any of its Subsidiaries and any creditor of Borrower or any of its Subsidiaries that signed a subordination, intercreditor, or other similar agreement with Collateral Agent or the Lenders, or any creditor that has signed such an agreement with Collateral Agent or the Lenders breaches any terms of such agreement;

8.10 Guaranty. (a) Any Guaranty terminates or ceases for any reason to be in full force and effect; (b) any Guarantor does not perform any obligation or covenant under any Guaranty; (c) any circumstance described in Section 8 occurs with respect to any Guarantor; or (d) a Material Adverse Change with respect to any Guarantor;

8.11 Governmental Approvals; FDA Action. (a) Any Governmental Approval shall have been revoked, rescinded, suspended, modified in an adverse manner, or not renewed in the ordinary course for a full term *and* such revocation, rescission, suspension, modification or non-renewal has resulted in or could reasonably be expected to result in a Material Adverse Change; or (b) (i) the FDA, DOJ, or other Governmental Authority initiates a Regulatory Action or any other enforcement action against Borrower or any of its Subsidiaries or any supplier of Borrower or any of its Subsidiaries that causes Borrower or any of its Subsidiaries to recall, withdraw, remove or discontinue manufacturing, distributing, and/or marketing any of its products, even if such action is based on previously disclosed conduct, and in each case such action is reasonably expected to cause a Material Adverse Effect; (ii) the FDA issues a warning letter or Regulatory Action to Borrower or any of its Subsidiaries with respect to any of its activities or products which could reasonably be expected to result in a Material Adverse Change; (iii) Borrower or any of its Subsidiaries conducts a mandatory or voluntary recall which could reasonably be expected to result in a Material Adverse Effect; (iv) Borrower or any of its Subsidiaries enters into a settlement agreement with the FDA, DOJ, or other Governmental Authority that could reasonably be expected to result in a Material Adverse Change even if such settlement agreement is based on previously disclosed conduct; or (v) Borrower or any of its Subsidiaries fails to remediate, in a manner satisfactory to the FDA, observations identified in an FDA Form 483 notice of inspection observation to the FDA's reasonable satisfaction within six (6) months of receipt; or (vi) the FDA revokes any authorization or permission granted under any Registration, or Borrower or any of its Subsidiaries withdraws any Registration, that could reasonably be expected to result in a Material Adverse Change.

8.12 Lien Priority; Intellectual Property. Any Lien created hereunder or by any other Loan Document shall at any time fail to constitute a valid and perfected Lien on any of the Collateral purported to be secured thereby, subject to no prior or equal Lien, other than Permitted Liens arising as a matter of applicable law. Any Intellectual Property material to Borrower's business shall cease to be validly owned or licensed by Borrower free and clear of any Liens other than Permitted Liens.

9. RIGHTS AND REMEDIES

9.1 Rights and Remedies.

(a) Upon the occurrence and during the continuance of an Event of Default, Collateral Agent may, and at the written direction of the Required Lenders shall, without notice or demand, do any or all of the following: (i) deliver notice of the Event of Default to Borrower, (ii) by notice to Borrower declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations shall be immediately due and payable without any action by Collateral Agent or the Lenders) or (iii) by notice to Borrower suspend or terminate the obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Collateral Agent and/or the Lenders (but if an Event of Default described in Section 8.5 occurs all obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Collateral Agent and/or the Lenders shall be immediately terminated without any action by Collateral Agent or the Lenders).

(b) Without limiting the rights of Collateral Agent and the Lenders set forth in Section 9.1(a) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, and shall at the written direction of the Required Lenders, without notice or demand, to do any or all of the following:

(i) foreclose upon and/or sell or otherwise liquidate, the Collateral;

(ii) apply to the Obligations any (a) balances and deposits of Borrower that Collateral Agent or any Lender holds or controls, or (b) any amount held or controlled by Collateral Agent or any Lender owing to or for the credit or the account of Borrower; and/or

(iii) commence and prosecute an Insolvency Proceeding or consent to Borrower commencing any Insolvency Proceeding.

(c) Without limiting the rights of Collateral Agent and the Lenders set forth in Sections 9.1(a) and (b) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, without notice or demand, to do any or all of the following:

(i) settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Collateral Agent considers advisable, notify any Person owing Borrower money of Collateral Agent's security interest in such funds, and verify the amount of such account;

(ii) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Collateral Agent requests and make it available in a location as Collateral Agent reasonably designates. Collateral Agent may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Borrower grants Collateral Agent a license to enter and occupy any of its premises, without charge, to exercise any of Collateral Agent's rights or remedies;

(iii) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, and/or advertise for sale, the Collateral. Collateral Agent is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's and each of its Subsidiaries' labels, Patents, Copyrights, mask works, rights

of use of any name, trade secrets, trade names, Trademarks, service marks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Collateral Agent's exercise of its rights under this Section 9.1, Borrower's and each of its Subsidiaries' rights under all licenses and all franchise agreements inure to Collateral Agent, for the benefit of the Lenders;

(iv) place a "hold" on any account maintained with Collateral Agent or the Lenders and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(v) demand and receive possession of Borrower's Books;

(vi) appoint a receiver to seize, manage and realize any of the Collateral, and such receiver shall have any right and authority as any competent court will grant or authorize in accordance with any applicable law, including any power or authority to manage the business of Borrower or any of its Subsidiaries; and

(vii) subject to clauses 9.1(a) and (b), exercise all rights and remedies available to Collateral Agent and each Lender under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof).

Notwithstanding any provision of this Section 9.1 to the contrary, upon the occurrence of any Event of Default, Collateral Agent shall have the right to exercise any and all remedies referenced in this Section 9.1 without the written consent of Required Lenders following the occurrence of an Exigent Circumstance.

9.2 Power of Attorney. Borrower hereby irrevocably appoints Collateral Agent as its lawful attorney-in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower's or any of its Subsidiaries' name on any checks or other forms of payment or security; (b) sign Borrower's or any of its Subsidiaries' name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Collateral Agent determines reasonable; (d) make, settle, and adjust all claims under Borrower's insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (f) transfer the Collateral into the name of Collateral Agent or a third party as the Code or any applicable law permits. Borrower hereby appoints Collateral Agent as its lawful attorney-in-fact to sign Borrower's or any of its Subsidiaries' name on any documents necessary to perfect or continue the perfection of Collateral Agent's security interest in the Collateral regardless of whether an Event of Default has occurred until all Obligations (other than inchoate indemnity obligations) have been satisfied in full and Collateral Agent and the Lenders are under no further obligation to extend the Term Loan hereunder. Collateral Agent's foregoing appointment as Borrower's or any of its Subsidiaries' attorney in fact, and all of Collateral Agent's rights and powers, coupled with an interest, are irrevocable until all Obligations (other than inchoate indemnity obligations) have been fully repaid and performed and Collateral Agent's and the Lenders' obligation to provide the Term Loan terminates.

9.3 Protective Payments. If Borrower or any of its Subsidiaries fail to obtain the insurance called for by Section 6.5 or fails to pay any premium thereon or fails to pay any other amount which Borrower or any of its Subsidiaries is obligated to pay under this Agreement or any other Loan Document, Collateral Agent may obtain such insurance or make such payment, and all amounts so paid by Collateral Agent are Lenders' Expenses and immediately due and payable, bearing interest at the Default Rate, and secured by the Collateral. Collateral Agent will make reasonable efforts to provide Borrower with notice of Collateral Agent obtaining such insurance or making such payment at the time it is obtained or paid or within a reasonable time thereafter. No such payments by Collateral Agent are deemed an agreement to make similar payments in the future or Collateral Agent's waiver of any Event of Default.

9.4 Application of Payments and Proceeds. Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence and during the continuance of an Event of Default, (a) Borrower irrevocably waives the right to direct the application of any and all payments at any time or times thereafter received by

Collateral Agent from or on behalf of Borrower or any of its Subsidiaries of all or any part of the Obligations, and, as between Borrower on the one hand and Collateral Agent and Lenders on the other, Collateral Agent shall have the continuing and exclusive right to apply and to reapply any and all payments received against the Obligations in such manner as Collateral Agent may deem advisable notwithstanding any previous application by Collateral Agent, and (b) the proceeds of any sale of, or other realization upon all or any part of the Collateral shall be applied: first, to the Lenders' Expenses; second, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the United States Bankruptcy Code, would have accrued on such amounts); third, to the principal amount of the Obligations outstanding; and fourth, to any other indebtedness or obligations of Borrower owing to Collateral Agent or any Lender under the Loan Documents. Any balance remaining shall be delivered to Borrower or to whoever may be lawfully entitled to receive such balance or as a court of competent jurisdiction may direct. In carrying out the foregoing, (x) amounts received shall be applied in the numerical order provided until exhausted prior to the application to the next succeeding category, and (y) each of the Persons entitled to receive a payment in any particular category shall receive an amount equal to its pro rata share of amounts available to be applied pursuant thereto for such category. Any reference in this Agreement to an allocation between or sharing by the Lenders of any right, interest or obligation "ratably," "proportionally" or in similar terms shall refer to Pro Rata Share unless expressly provided otherwise. Collateral Agent, or if applicable, each Lender, shall promptly remit to the other Lenders such sums as may be necessary to ensure the ratable repayment of each Lender's portion of any Term Loan and the ratable distribution of interest, fees and reimbursements paid or made by Borrower. Notwithstanding the foregoing, a Lender receiving a scheduled payment shall not be responsible for determining whether the other Lenders also received their scheduled payment on such date; provided, however, if it is later determined that a Lender received more than its ratable share of scheduled payments made on any date or dates, then such Lender shall remit to Collateral Agent or other Lenders such sums as may be necessary to ensure the ratable payment of such scheduled payments, as instructed by Collateral Agent. If any payment or distribution of any kind or character, whether in cash, properties or securities, shall be received by a Lender in excess of its ratable share, then the portion of such payment or distribution in excess of such Lender's ratable share shall be received by such Lender in trust for and shall be promptly paid over to the other Lender for application to the payments of amounts due on the other Lenders' claims. To the extent any payment for the account of Borrower is required to be returned as a voidable transfer or otherwise, the Lenders shall contribute to one another as is necessary to ensure that such return of payment is on a pro rata basis. If any Lender shall obtain possession of any Collateral, it shall hold such Collateral for itself and as agent and bailee for Collateral Agent and other Lenders for purposes of perfecting Collateral Agent's security interest therein.

9.5 Liability for Collateral. So long as Collateral Agent and the Lenders comply with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Collateral Agent and the Lenders, Collateral Agent and the Lenders shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Borrower bears all risk of loss, damage or destruction of the Collateral.

9.6 No Waiver; Remedies Cumulative. Failure by Collateral Agent or any Lender, at any time or times, to require strict performance by Borrower of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of Collateral Agent or any Lender thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by Collateral Agent and the Required Lenders and then is only effective for the specific instance and purpose for which it is given. The rights and remedies of Collateral Agent and the Lenders under this Agreement and the other Loan Documents are cumulative. Collateral Agent and the Lenders have all rights and remedies provided under the Code, any applicable law, by law, or in equity. The exercise by Collateral Agent or any Lender of one right or remedy is not an election, and Collateral Agent's or any Lender's waiver of any Event of Default is not a continuing waiver. Collateral Agent's or any Lender's delay in exercising any remedy is not a waiver, election, or acquiescence.

9.7 Demand Waiver. Borrower waives, to the fullest extent permitted by law, demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Collateral Agent or any Lender on which Borrower or any Subsidiary is liable.

10. NOTICES

All notices, consents, requests, approvals, demands, or other communication (collectively, "**Communication**") by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by electronic mail (if an email address is specified herein) or facsimile transmission; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, facsimile number, or email address indicated below. Any of Collateral Agent, Lender or Borrower may change its mailing electronic mail address or facsimile number by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Borrower:	EXAGEN DIAGNOSTICS, INC. 1261 Liberty Way, Suite C Vista, CA 92081 Attn: Chief Financial Officer Email:
with a copy (which shall not constitute notice) to:	LATHAM & WATKINS LLP 505 Montgomery Street, Suite 2000 San Francisco, CA 94111-6538 Attn: Haim Zaltzman Email:
If to Collateral Agent:	INNOVATUS LIFE SCIENCES LENDING FUND I, LP 777 Third Avenue, 25th Floor New York, NY 10017 Attn: Claes Ekstrom Email:
with a copy (which shall not constitute notice) to:	COOLEY LLP (US) 3175 Hanover Street Palo Alto, California 94304-1130 Attn: Troy Zander Email:

11. CHOICE OF LAW, VENUE AND JURY TRIAL WAIVER

11.1 Waiver of Jury Trial. EACH OF BORROWER, COLLATERAL AGENT AND LENDERS UNCONDITIONALLY WAIVES ANY AND ALL RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, ANY OF THE OTHER LOAN DOCUMENTS, ANY OF THE INDEBTEDNESS SECURED HEREBY, ANY DEALINGS AMONG BORROWER, COLLATERAL AGENT AND/OR LENDERS RELATING TO THE SUBJECT MATTER OF THIS TRANSACTION OR ANY RELATED TRANSACTIONS, AND/OR THE RELATIONSHIP THAT IS BEING ESTABLISHED AMONG BORROWER, COLLATERAL AGENT AND/OR LENDERS. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT. THIS WAIVER IS IRREVOCABLE. THIS WAIVER MAY NOT BE MODIFIED EITHER ORALLY OR IN WRITING. THE WAIVER ALSO SHALL APPLY TO ANY SUBSEQUENT AMENDMENTS, RENEWALS, SUPPLEMENTS OR MODIFICATIONS TO THIS AGREEMENT, ANY OTHER LOAN DOCUMENTS, OR TO ANY OTHER DOCUMENTS OR AGREEMENTS RELATING TO THIS TRANSACTION OR ANY RELATED TRANSACTION. THIS AGREEMENT MAY BE FILED AS A WRITTEN CONSENT TO A TRIAL BY THE COURT.

11.2 Governing Law and Jurisdiction.

(a) THIS AGREEMENT, THE OTHER LOAN DOCUMENTS (EXCLUDING THOSE LOAN DOCUMENTS THAT BY THEIR OWN TERMS ARE EXPRESSLY GOVERNED BY THE LAWS OF ANOTHER JURISDICTION) AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER AND THEREUNDER SHALL IN ALL RESPECTS BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH, THE INTERNAL LAWS OF THE STATE OF NEW YORK (WITHOUT REGARD TO THE CONFLICT OF LAWS PRINCIPLES THAT WOULD RESULT IN THE APPLICATION OF ANY LAWS OTHER THAN THE LAWS OF THE STATE OF NEW YORK), INCLUDING ALL MATTERS OF CONSTRUCTION, VALIDITY AND PERFORMANCE, REGARDLESS OF THE LOCATION OF THE COLLATERAL, PROVIDED, HOWEVER, THAT IF THE LAWS OF ANY JURISDICTION OTHER THAN NEW YORK SHALL GOVERN IN REGARD TO THE VALIDITY, PERFECTION OR EFFECT OF PERFECTION OF ANY LIEN OR IN REGARD TO PROCEDURAL MATTERS AFFECTING ENFORCEMENT OF ANY LIENS IN COLLATERAL, SUCH LAWS OF SUCH OTHER JURISDICTIONS SHALL CONTINUE TO APPLY TO THAT EXTENT.

(b) Submission to Jurisdiction. Any legal action or proceeding with respect to the Loan Documents shall be brought exclusively in the courts of the State of New York located in the City of New York, Borough of Manhattan, or of the United States of America for the Southern District of New York and, by execution and delivery of this Agreement, Borrower hereby accepts for itself and in respect of its Property, generally and unconditionally, the jurisdiction of the aforesaid courts. Notwithstanding the foregoing, Collateral Agent and Lenders shall have the right to bring any action or proceeding against Borrower (or any property of Borrower) in the court of any other jurisdiction Collateral Agent or Lenders deem necessary or appropriate in order to realize on the Collateral or other security for the Obligations. The parties hereto hereby irrevocably waive any objection, including any objection to the laying of venue or based on the grounds of *forum non conveniens*, that any of them may now or hereafter have to the bringing of any such action or proceeding in such jurisdictions.

(c) Service of Process. Borrower irrevocably waives personal service of any and all legal process, summons, notices and other documents and other service of process of any kind and consents to such service in any suit, action or proceeding brought in the United States of America with respect to or otherwise arising out of or in connection with any Loan Document by any means permitted by applicable requirements of law, including by the mailing thereof (by registered or certified mail, postage prepaid) to the address of Borrower specified herein (and shall be effective when such mailing shall be effective, as provided therein). Borrower agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

(d) Non-exclusive Jurisdiction. Nothing contained in this Section 11.2 shall affect the right of Collateral Agent or Lenders to serve process in any other manner permitted by applicable requirements of law or commence legal proceedings or otherwise proceed against Borrower in any other jurisdiction.

12. GENERAL PROVISIONS

12.1 Successors and Assigns. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not transfer, pledge or assign this Agreement or any rights or obligations under it without Collateral Agent's prior written consent (which may be granted or withheld in Collateral Agent's discretion, subject to Section 12.5). The Lenders have the right, without the consent of or notice to Borrower, to sell, transfer, assign, pledge, negotiate, or grant participation in **(**any such sale, transfer, assignment, negotiation**,** or grant of a participation, a "**Lender Transfer**"**)** all or any part of, or any interest in, the Lenders' obligations, rights, and benefits under this Agreement and the other Loan Documents; provided, however, so long as no Event of Default has occurred and is continuing, no Lender Transfer shall be permitted, without Borrower's consent, to any Person which is a direct competitor of Borrower or a vulture hedge fund, each as determined by Collateral Agent.

12.2 Indemnification. Borrower agrees to indemnify, defend and hold Collateral Agent and the Lenders and their respective directors, officers, employees, consultants, agents, attorneys, or any other Person affiliated with or representing Collateral Agent or the Lenders (each, an "**Indemnified Person**") harmless against:

(a) all obligations, demands, claims, and liabilities (collectively, "**Claims**") asserted by any other party in connection with; related to; following; or arising from, out of or under, the transactions contemplated by the Loan Documents; and (b) all losses or Lenders' Expenses incurred, or paid by Indemnified Person in connection with; related to; following; or arising from, out of or under, the transactions contemplated by the Loan Documents between Collateral Agent, and/or the Lenders and Borrower (including reasonable attorneys' fees and expenses), except for Claims and/or losses directly caused by such Indemnified Person's gross negligence or willful misconduct. Borrower hereby further indemnifies, defends and holds each Indemnified Person harmless from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements of any kind or nature whatsoever (including the fees and disbursements of counsel for such Indemnified Person) in connection with any investigative, response, remedial, administrative or judicial matter or proceeding, whether or not such Indemnified Person shall be designated a party thereto and including any such proceeding initiated by or on behalf of Borrower, and the reasonable expenses of investigation by engineers, environmental consultants and similar technical personnel and any commission, fee or compensation claimed by any broker (other than any broker retained by Collateral Agent or Lenders) asserting any right to payment for the transactions contemplated hereby which may be imposed on, incurred by or asserted against such Indemnified Person as a result of or in connection with the transactions contemplated hereby and the use or intended use of the proceeds of the loan proceeds except for liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements directly caused by such Indemnified Person's gross negligence or willful misconduct.

12.3 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

12.4 Correction of Loan Documents. Collateral Agent may correct patent errors and fill in any blanks in this Agreement and the other Loan Documents consistent with the agreement of the parties.

12.5 Amendments in Writing; Integration. (a) No amendment, modification, termination or waiver of any provision of this Agreement or any other Loan Document, no approval or consent thereunder, or any consent to any departure by Borrower or any of its Subsidiaries therefrom, shall in any event be effective unless the same shall be in writing and signed by Borrower, Collateral Agent and the Required Lenders provided that:

(i) no such amendment, waiver or other modification that would have the effect of increasing or reducing a Lender's Term Loan Commitment or Commitment Percentage shall be effective as to such Lender without such Lender's written consent;

(ii) no such amendment, waiver or modification that would affect the rights and duties of Collateral Agent shall be effective without Collateral Agent's written consent or signature; and

(iii) no such amendment, waiver or other modification shall, unless signed by all the Lenders directly affected thereby, (A) reduce the principal of, rate of interest on or any fees with respect to any Term Loan or forgive any principal, interest (other than default interest) or fees (other than late charges) with respect to any Term Loan (B) postpone the date fixed for, or waive, any payment of principal of any Term Loan or of interest on any Term Loan (other than default interest) or any fees provided for hereunder (other than late charges or for any termination of any commitment); (C) change the definition of the term "Required Lenders" or the percentage of Lenders which shall be required for the Lenders to take any action hereunder; (D) release all or substantially all of any material portion of the Collateral, authorize Borrower to sell or otherwise dispose of all or substantially all or any material portion of the Collateral or release any Guarantor of all or any portion of the Obligations or its guaranty obligations with respect thereto, except, in each case with respect to this clause (D), as otherwise may be expressly permitted under this Agreement or the other Loan Documents (including in connection with any disposition permitted hereunder); (E) amend, waive or otherwise modify this Section 12.5 or the definitions of the terms used in this Section 12.5 insofar as the definitions affect the substance of this Section 12.5; (F) consent to the assignment, delegation or other transfer by Borrower of any of its rights and obligations under any Loan Document or release Borrower of its payment obligations under any Loan Document, except, in each case with respect to this clause (F), pursuant to a merger or consolidation permitted pursuant to this Agreement; (G) amend any of the provisions of Section 9.4 or amend any of the definitions of Pro Rata Share, Term Loan Commitment, Commitment Percentage or that provide for the Lenders to receive their Pro Rata Shares of any fees, payments, setoffs or proceeds of Collateral

hereunder; (H) subordinate the Liens granted in favor of Collateral Agent securing the Obligations; or (I) amend any of the provisions of Section 12.5. It is hereby understood and agreed that all Lenders shall be deemed directly affected by an amendment, waiver or other modification of the type described in the preceding clauses (C), (D), (E), (F), (G) and (H) of the immediately preceding sentence.

(b) Other than as expressly provided for in Section 12.5(a)(i)-(iii), Collateral Agent may, if requested by the Required Lenders, from time to time designate covenants in this Agreement less restrictive by notification to a representative of Borrower.

(c) This Agreement and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements with respect to such subject matter. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Agreement and the Loan Documents merge into this Agreement and the Loan Documents.

12.6 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement.

12.7 Survival. All covenants, representations and warranties made in this Agreement continue in full force and effect until this Agreement has terminated pursuant to its terms and all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied. The obligation of Borrower in Section 12.2 to indemnify each Lender and Collateral Agent, as well as the confidentiality provisions in Section 12.8 below, shall survive until the statute of limitations with respect to such claim or cause of action shall have run.

12.8 Confidentiality. In handling any confidential information of Borrower, the Lenders and Collateral Agent shall exercise the same degree of care that it exercises for their own proprietary information, but disclosure of information may be made: (a) subject to the terms and conditions of this Agreement, to the Lenders' and Collateral Agent's Subsidiaries or Affiliates; (b) to prospective transferees (other than those identified in (a) above) or purchasers of any interest in the Term Loan (provided, however, the Lenders and Collateral Agent shall use best efforts to obtain such prospective transferee's or purchaser's agreement to the terms of this provision or to substantially similar confidentiality terms); (c) as required by law, regulation, subpoena, or other order; (d) to Lenders' or Collateral Agent's regulators or as otherwise required in connection with an examination or audit; (e) as Collateral Agent reasonably considers appropriate in exercising remedies under the Loan Documents; and (f) to third party service providers of the Lenders and/or Collateral Agent so long as such service providers have executed a confidentiality agreement or have agreed to similar confidentiality terms with the Lenders and Collateral Agent with terms no less restrictive than those contained herein. Confidential information does not include information that either: (i) is in the public domain or in the Lenders' and/or Collateral Agent's possession when disclosed to the Lenders and/or Collateral Agent, or becomes part of the public domain after disclosure to the Lenders and/or Collateral Agent at no fault of the Lenders or the Collateral Agent; or (ii) is disclosed to the Lenders and/or Collateral Agent by a third party, if the Lenders and/or Collateral Agent does not know that the third party is prohibited from disclosing the information. Collateral Agent and the Lenders may use confidential information for any purpose solely related to their roles under this Agreement or the Loan Documents, including, for the development of client databases, reporting purposes, and market analysis, in each case solely if such information is anonymous and does not disclose any confidential information as otherwise required hereunder. The provisions of the immediately preceding sentence shall survive the termination of this Agreement. The agreements provided under this Section 12.8 supersede all prior agreements, understanding, representations, warranties, and negotiations between the parties about the subject matter of this Section 12.8.

12.9 Right of Set Off. Borrower hereby grants to Collateral Agent and to each Lender, a lien, security interest and right of set off as security for all Obligations to Collateral Agent and each Lender hereunder, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property, now or hereafter in the possession, custody, safekeeping or control of Collateral Agent or the Lenders or any entity under the control of Collateral Agent or the Lenders (including a Collateral Agent affiliate) or in transit to any of them. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, Collateral Agent or the Lenders may set off the same or any part thereof and apply the same to any liability or obligation of Borrower even

though unmatured and regardless of the adequacy of any other collateral securing the Obligations. ANY AND ALL RIGHTS TO REQUIRE COLLATERAL AGENT TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF BORROWER ARE HEREBY KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVED BY BORROWER.

12.10 Cooperation of Borrower. If necessary, Borrower agrees to (i) execute any documents reasonably required to effectuate and acknowledge each assignment of a Term Loan Commitment or Term Loan to an assignee in accordance with Section 12.1, (ii) make Borrower's management available to meet with Collateral Agent and prospective participants and assignees of Term Loan Commitments (which meetings shall be conducted no more often than once every twelve months unless an Event of Default has occurred and is continuing), and (iii) assist Collateral Agent or the Lenders in the preparation of information relating to the financial affairs of Borrower as any prospective participant or assignee of a Term Loan Commitment or Term Loan reasonably may request. Subject to the provisions of Section 12.8, Borrower authorizes each Lender to disclose to any prospective participant or assignee of a Term Loan Commitment, any and all information in such Lender's possession concerning Borrower and its financial affairs which has been delivered to such Lender by or on behalf of Borrower pursuant to this Agreement, or which has been delivered to such Lender by or on behalf of Borrower in connection with such Lender's credit evaluation of Borrower prior to entering into this Agreement.

12.11 Public Announcement. Borrower hereby agrees that Collateral Agent and Innovatus may make a public announcement of the transactions contemplated by this Agreement, and may publicize the same in marketing materials, newspapers and other publications, and otherwise, and in connection therewith may use Borrower's name, tradenames and logos, in each case with the prior written consent of Borrower not to be unreasonably withheld, conditioned or delayed.

12.12 Collateral Agent and Lender Agreement. Collateral Agent and each Lender hereby agree to the terms and conditions set forth on Annex I attached hereto. Borrower acknowledges and agrees to the terms and conditions set forth on Annex I attached hereto.

13. DEFINITIONS

As used in this Agreement, the following terms have the following meanings:

"**Account**" is any "account" as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to Borrower.

"**Account Debtor**" is any "account debtor" as defined in the Code with such additions to such term as may hereafter be made under the Code.

"**Affiliate**" of any Person is a Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners if such Person is a partnership and, for any Person that is a limited liability company, that Person's managers and members.

"**Amortization Date**" is the earliest of (i) the first Payment Date immediately following the occurrence of an Event of Default that is continuing, (ii) the first Payment Date immediately following the date, if any, upon which the Interest-Only Milestones are not met and Borrower fails timely to achieve the Equity Cure (the earliest such date in the foregoing clauses (i) and (ii), the "**Early Amortization Date**") and (iii) the thirty-seventh (37th) Payment Date following the Effective Date. Notwithstanding the foregoing and for the avoidance of doubt, any amortization payments that would have been due on the Payment Dates occurring after the Interest-Only Milestones are not met but for the Equity Cure period, shall be due and payable at the end of the Equity Cure period if the Borrower fails to timely achieve the Equity Cure.

"**Anti-Terrorism Laws**" are any laws relating to terrorism or money laundering, including without

limitation Executive Order No. 13224 (effective September 24, 2001), the USA PATRIOT Act, the laws comprising or implementing the Bank Secrecy Act, and the laws administered by OFAC.

"**A/R Lender**" is the lender providing Borrower the A/R Line.

"**A/R Line**" means a credit facility made available to Borrower in an amount not to exceed Three Million Dollars ($3,000,000.00), repayment of which is secured by Borrower's accounts receivable only, and which credit facility is subject to an intercreditor agreement between Collateral Agent and the A/R Lender in form and content reasonably acceptable to Collateral Agent.

"**Blocked Person**" is any Person: (a) listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (b) a Person owned or controlled by, or acting for or on behalf of, any Person that is listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (c) a Person with which any Lender is prohibited from dealing or otherwise engaging in any transaction by any Anti-Terrorism Law, (d) a Person that commits, threatens or conspires to commit or supports "terrorism" as defined in Executive Order No. 13224, or (e) a Person that is named a "specially designated national" or "blocked person" on the most current list published by OFAC or other similar list.

"**Borrower's Books**" are Borrower's or any of its Subsidiaries' books and records including ledgers, federal, and state tax returns, records regarding Borrower's or its Subsidiaries' assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

"**Business Day**" is any day that is not a Saturday, Sunday or a day on which Collateral Agent is closed.

"**Cash Equivalents**" are (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor's Ratings Group or Moody's Investors Service, Inc.; and (c) certificates of deposit maturing no more than one (1) year after issue.

"**Code**" is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the State of New York; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Collateral Agent's Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the State of New York, the term "Code" shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

"**Collateral**" is any and all properties, rights and assets of Borrower described on Exhibit A.

"**Collateral Account**" is any Deposit Account, Securities Account, or Commodity Account, or any other bank account maintained by Borrower or any Subsidiary at any time (that is required to become either a co- Borrower hereunder or a secured guarantor with respect to the Obligations in accordance with Section 6.10).

"**Commitment Percentage**" is set forth in Schedule 1.1, as amended from time to time.

"**Commodity Account**" is any "commodity account" as defined in the Code with such additions to such term as may hereafter be made under the Code.

"**Compliance Certificate**" is that certain certificate in substantially the form attached hereto as Exhibit C.

"**Contingent Obligation**" is, for any Person, any direct or indirect liability, contingent or not, of that

Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another Person such as an obligation directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; but "Contingent Obligation" does not include endorsements in the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

"**Control Agreement**" is any control agreement entered into among the depository institution at which Borrower or any of its domestic U.S. Subsidiaries maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower or any of its domestic U.S. Subsidiaries maintains a Securities Account or a Commodity Account, Borrower and such Subsidiary, and Collateral Agent pursuant to which Collateral Agent, for the benefit of the Lenders, obtains "control" (within the meaning of the Code) over such Deposit Account, Securities Account, or Commodity Account.

"**Copyrights**" are any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

"**CRP**" means, collectively, Capital Royalty Partners II, L.P., Capital Royalty Partners II – Parallel Fund "A" L.P., Parallel Investment Opportunities Partners II L.P. and Capital Royalty Partners II (Cayman) L.P.

"**Deposit Account**" is any "deposit account" as defined in the Code with such additions to such term as may hereafter be made.

"**Disbursement Letter**" is that certain form attached hereto as Exhibit B-2.

"**DOJ**" means the U.S. Department of Justice or any successor thereto or any other comparable Governmental Authority.

"**Dollars**," "**dollars**" and "$" each mean lawful money of the United States.

"**Equipment**" is all "equipment" as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

"**Equity Cure**" means Borrower's receipt, within sixty (60) days of any failure to achieve the Interest-Only Milestones, of gross proceeds from the sale and issuance of Borrower's equity securities or Subordinated Debt, which in each case will not have any redemption, clawback, escrow or similar terms of at least Ten Million Dollars ($10,000,000.00); provided that (i) the net proceeds thereof are no less than Nine Million Five Hundred Thousand Dollars ($9,500,000.00); and (ii) in the event any portion of the Equity Cure is raised in the form of Subordinated Debt, at least fifty percent (50.00%) of such Subordinated Debt must be from Borrower's investors as of the Effective Date.

"**ERISA**" is the Employee Retirement Income Security Act of 1974, as amended, and its regulations.

"**Excluded Taxes**" means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient, (a) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (i) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (ii) that are Other Connection Taxes, (b) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts

payable to or for the account of such Lender with respect to an applicable interest in a Term Loan or Commitment pursuant to a law in effect on the date on which (i) such Lender acquires such interest in a Loan or Commitment or (ii) such Lender changes its lending office, except in each case to the extent that, pursuant to Section 2.5, amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its lending office, (c) Taxes attributable to such Recipient's failure to comply with Section 2.5(e) and (d) any U.S. federal withholding Taxes imposed under FATCA.

"**Exigent Circumstance**" means any event or circumstance that, in the reasonable judgment of Collateral Agent, imminently threatens the ability of Collateral Agent to realize upon all or any material portion of the Collateral, such as, without limitation, fraudulent removal, concealment, or abscondment thereof, destruction or material waste thereof, or failure of Borrower or any of its Subsidiaries after reasonable demand to maintain or reinstate adequate casualty insurance coverage, or which, in the judgment of Collateral Agent, could reasonably be expected to result in a material diminution in value of the Collateral.

"**Existing Indebtedness**" is the indebtedness of Borrower to CRP in the aggregate principal outstanding amount as of the Effective Date of approximately Seventeen Million Two Hundred Ninety Seven Thousand Nine Hundred Ninety Nine and Three One-Hundredths Dollars ($17,297,999.03) pursuant to that certain Term Loan Agreement, dated as of October 10, 2013, as amended from time to time, entered into by and between CRP and Borrower.

"**Facility Fee**" is a fee due on the Effective Date equal to Two Hundred Fifty Thousand Dollars ($250,000.00).

"**FATCA**" means Sections 1471 through 1474 of the IRC, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof and any agreements entered into pursuant to Section 1471(b)(1) of the IRC, any intergovernmental agreement entered into in connection with the implementation of such Sections of the IRC and any fiscal or regulatory legislation, rules or practices adopted pursuant to such intergovernmental agreement.

"**FDA**" means the U.S. Food and Drug Administration or any successor thereto or any other comparable Governmental Authority.

"**Final Fee**" is a payment (in addition to and not a substitution for the regular monthly payments of principal plus accrued interest or any other fee payable hereunder) due on the earliest to occur of (a) the Maturity Date, or (b) the acceleration of any Term Loan, or (c) the prepayment of the Term Loan pursuant to Section 2.2(c), in each case equal to four percent (4.00%) *multiplied* by the Term Loan funded under this Agreement, payable to Lenders in accordance with their respective Pro Rata Shares.

"**Foreign Subsidiary**" is a Subsidiary that is not an entity organized under the laws of the United States or any state thereof.

"**Funding Date**" is any date on which the Term Loan is made to or on account of Borrower, which shall be a Business Day.

"**GAAP**" is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession in the United States, which are applicable to the circumstances as of the date of determination.

"**General Intangibles**" are all "general intangibles" as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made.

"**Governmental Approval**" is any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority.

"**Governmental Authority**" is any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body (including, without limitation, the FDA and any state board of pharmacy or state pharmacy licensing authority), court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

"**Guarantor**" is any Person providing a Guaranty in favor of Collateral Agent for the benefit of the Lenders.

"**Guaranty**" is any guarantee of all or any part of the Obligations, as the same may from time to time be amended, restated, modified or otherwise supplemented.

"**Gross Margin**" is the ratio, expressed as a percentage, of Gross Profit to revenues under GAAP**.**

"**Gross Profit**" is revenues minus the cost of sales, in each case computed in accordance with GAAP**.**

"**Indebtedness**" is (a) indebtedness for borrowed money or the deferred price of property or services, such as reimbursement and other obligations for surety bonds and letters of credit, (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) capital lease obligations, and (d) Contingent Obligations.

"**Indemnified Taxes**" means (a) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of Borrower under any Loan Document and (b) to the extent not otherwise described in (a), Other Taxes.

"**Insolvency Proceeding**" is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions or proceedings seeking reorganization, arrangement, or other relief.

"**Insolvent**" means not Solvent.

"**Intellectual Property**" means all of Borrower's or any of its Subsidiaries' right, title and interest in and to the following:

(a) its Copyrights, Trademarks and Patents;

(b) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how, operating manuals;

(c) any and all source code;

(d) any and all design rights which may be available to Borrower;

(e) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above;

(f) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents; and

(g) all licenses, sublicenses or other contracts under which Borrower or any Subsidiary is granted rights by third parties in any Intellectual Property asset.

"**Interest-Only Milestones**" means achievement of each of the following: (i) the I/O Revenue Milestone; and (ii) (x) the I/O Gross Margin Milestone or (y) the I/O Gross Profit Milestone; in each case, written evidence of which is provided, and is in form and content reasonably acceptable, to Collateral Agent and the Lenders. Notwithstanding the foregoing, Borrower's failure to achieve the Interest-Only Milestones may be cured by, at Borrower's election, either: (i) an increase in the interest rate set forth in Section 2.3(c) by 8.0% from the date of any such failure until (A) the I/O Revenue Milestone and (B) either (x) the I/O Gross Margin Milestone or (y) the I/O Gross Profit Milestone have been achieved; or (ii) the Equity Cure; such election to be made in writing to Collateral Agent and the Lenders no later than forty-five (45) days after the failure to achieve the Interest-Only Milestones (or any of them).

"**Inventory**" is all "inventory" as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made under the Code, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of any Person's custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

"**Investment**" is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance or capital contribution to any Person.

"**I/O Gross Margin Milestone**" means actual minimum trailing twelve (12) month Gross Margin, measured at the end of each calendar quarter commencing with the quarter ending December 31, 2017, greater than forty-five percent (45.00%); written evidence of which is provided, and is in form and content reasonably acceptable, to Collateral Agent and Innovatus; provided that Borrower shall have thirty (30) calendar days from the last day of the applicable quarter to present unaudited financial statements to Collateral Agent and Innovatus for review, to determine compliance with the I/O Gross Margin Milestone.

"**I/O Gross Profit Milestone**" means actual minimum trailing twelve (12) month Gross Profit, measured at the end of each calendar quarter commencing with the quarter ending December 31, 2017, greater than seventy-five percent (75.00%) of projected Gross Profit (such projections attached hereto as Annex Q (the "**Management Plan**")); written evidence of which is provided, and is in form and content reasonably acceptable, to Collateral Agent and Innovatus; provided that Borrower shall have thirty (30) calendar days from the last day of the applicable quarter to present unaudited financial statements to Collateral Agent and Innovatus for review, to determine compliance with the I/O Gross Profit Milestone

"**I/O Revenue Milestone**" means actual minimum trailing twelve (12) month revenue under GAAP, measured at the end of each calendar quarter commencing with the quarter ending December 31, 2017, greater than seventy-five percent (75.00%) of revenue under GAAP projected in the Management Plan; written evidence of which is provided, and is in form and content reasonably acceptable, to Collateral Agent and Innovatus; provided that Borrower shall have thirty (30) calendar days from the last day of the applicable quarter to present unaudited financial statements to Collateral Agent and Innovatus for review, to determine compliance with the I/O Revenue Milestone.

"**IP Security Agreement**" is that certain Intellectual Property Security Agreement executed and delivered by Borrower to Collateral Agent and dated as of the Effective Date, as may be amended, restated, or otherwise modified or supplemented from time to time.

"**IRC**" means the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder.

"**Key Person**" is each of Borrower's (i) President and Chief Executive Officer, who is Ron Rocca as of the Effective Date, (ii) Chief Financial Officer, who is Kamal Adawi as of the Effective Date, (iii) Chief Scientific Officer, who is Thierry Dervieux as of the Effective Date and (iv) Claudia Ibarra, who is Senior Vice President, Laboratory Operations as of the Effective Date.

"**Knowledge**" means to the "best of" Borrower's knowledge, or with a similar qualification, knowledge or

awareness means the actual knowledge, after reasonable investigation, of the Responsible Officers.

"**Lender**" is any one of the Lenders.

"**Lenders**" are the Persons identified on Schedule 1.1 hereto and each assignee that becomes a party to this Agreement pursuant to Section 12.1.

"**Lenders' Expenses**" are all reasonable and actual audit fees and expenses, costs, and expenses (including reasonable attorneys' fees and expenses, as well as appraisal fees, fees incurred on account of lien searches, inspection fees, and filing fees) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred by Collateral Agent and/or the Lenders in connection with the Loan Documents.

"**Lien**" is a claim, mortgage, deed of trust, levy, charge, pledge, security interest, or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

"**Loan Documents**" are, collectively, this Agreement, the IP Security Agreement, each Secured Promissory Note, each Warrant, the Perfection Certificate(s), each Control Agreement, each Compliance Certificate, each Loan Payment Request Form, each Disbursement Letter, any subordination agreements, any note, or notes or guaranties executed by Borrower or any other Person, and any other present or future agreement entered into by Borrower, any Guarantor or any other Person for the benefit of the Lenders and Collateral Agent in connection with this Agreement; all as amended, restated, or otherwise modified or supplemented from time to time.

"**Loan Payment Request Form**" is that certain form attached hereto as Exhibit B-1.

"**Material Adverse Change**" is (a) a material adverse change in the business, operations or financial condition of Borrower or any Subsidiary, taken as a whole; (b) a material impairment of the prospect of repayment of any portion of the Obligations, or (c) a material adverse effect on the Collateral.

"**Material Agreement**" is any license, agreement or other contractual arrangement with a Person or Governmental Authority whereby Borrower or any of its Subsidiaries is reasonably likely to be required to transfer, either in-kind or in cash, prior to the Maturity Date, assets or property valued (book or market) at more than Five Hundred Thousand Dollars ($500,000.00) in the aggregate or any license, agreement or other contractual arrangement conveying rights in or to any material Intellectual Property necessary to make, use or sell any Inventory, products or services of Borrower or any Subsidiary. As used herein, "material Intellectual Property" includes but is not limited to U.S. Patent No.s 7,585,640 and 7,390,631, and U.S. Patent Application No.s 13/992,086 and 14/767,461.

"**Maturity Date**" is the earlier of (i) September 7, 2022 and (ii) eighteen (18)) months following the Early Amortization Date, if applicable.

"**Obligations**" are all of Borrower's obligations to pay when due any debts, principal, interest, Lenders' Expenses, the Prepayment Fee, the Final Fee, and other amounts Borrower owes the Lenders now or later, in connection with, related to, following, or arising from, out of or under, this Agreement or, the other Loan Documents, or otherwise (other than the Warrant or any equity investment related thereto), and including interest accruing after Insolvency Proceedings begin (whether or not allowed) and debts, liabilities, or obligations of Borrower assigned to the Lenders and/or Collateral Agent, and the performance of Borrower's duties under the Loan Documents (other than the Warrant or any equity investment related thereto).

"**OFAC**" is the U.S. Department of Treasury Office of Foreign Assets Control.

"**OFAC Lists**" are, collectively, the Specially Designated Nationals and Blocked Persons List maintained by OFAC pursuant to Executive Order No. 13224, 66 Fed. Reg. 49079 (Sept. 25, 2001) and/or any other list of terrorists or other restricted Persons maintained pursuant to any of the rules and regulations of OFAC or pursuant to any other applicable Executive Orders.

"**Operating Documents**" are, for any Person, such Person's formation documents, as certified by the Secretary of State (or equivalent agency) of such Person's jurisdiction of organization on a date that is no earlier than thirty (30) days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

"**Other Connection Taxes**" means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax (other than connections arising from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Loan Document or pursuant to any Lender Transfer).

"**Other Taxes**" means all present or future stamp, court or documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment.

"**Patents**" means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, re-examination certificates, utility models, extensions and continuations-in-part of the same.

"**Payment Date**" is the first (1st) calendar day of each calendar month, commencing on October 1, 2017.

"**Permitted Indebtedness**" is:

(a) Borrower's Indebtedness to the Lenders and Collateral Agent under this Agreement and the other Loan Documents;

(b) Indebtedness existing on the Effective Date and disclosed on the Perfection Certificate(s);

(c) Indebtedness consisting of the A/R Line;

(d) Subordinated Debt;

(e) unsecured Indebtedness to trade creditors and Indebtedness in connection with credit cards incurred in the ordinary course of business;

(f) Indebtedness consisting of capitalized lease obligations, equipment financings and purchase money Indebtedness, in each case incurred by Borrower or any of its Subsidiaries to finance the acquisition, repair, improvement or construction of fixed or capital assets of such Person, provided that (i) the aggregate outstanding principal amount of all such Indebtedness does not exceed Five Hundred Thousand Dollars ($500,000.00) at any time and (ii) the principal amount of such Indebtedness does not exceed the lower of the cost or fair market value of the property so acquired or built or of such repairs or improvements financed with such Indebtedness (each measured at the time of such acquisition, repair, improvement or construction is made);

(g) Indebtedness consisting of letters of credit securing real property leases and/or subleases entered into in the ordinary course of business, not to exceed the face amount of Five Hundred Thousand Dollars ($500,000.00) (or such greater amount as may be approved by the Collateral Agent in it reasonable discretion);

(h) [Reserved];

(i) Indebtedness in the notional amount not to exceed One Hundred Thousand Dollars ($100,000.00) incurred in connection with the hedges and similar agreements entered into the ordinary course of Borrower's business;

(j) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of Borrower's business; and

(k) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (h) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose materially more burdensome terms upon Borrower, or its Subsidiary, as the case may be.

"**Permitted Investments**" are:

(a) Investments disclosed on the Perfection Certificate(s) and existing on the Effective Date;

(b) Investments consisting of cash and Cash Equivalents, and (ii) any Investments permitted by Borrower's investment policy, as amended from time to time, provided that such investment policy (and any such amendment thereto) has been approved in writing by Collateral Agent, which such investment policy submitted to Collateral Agent by Borrower prior to the Effective Date is deemed approved;

(c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower;

(d) Investments consisting of Deposit Accounts in which Collateral Agent has a perfected security interest as required hereunder;

(e) Investments in connection with Transfers permitted by Section 7.1 and Permitted Indebtedness and Permitted Liens to the extent such transaction constitutes an Investment;

(f) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower's board of directors, not to exceed Two Hundred Fifty Thousand Dollars ($250,000.00) in the aggregate for (i) and (ii) in any fiscal year;

(g) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(h) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (h) shall not apply to Investments of Borrower in any Subsidiary;

(i) Investments in (A) Subsidiaries that are co-borrowers of the Obligations or Guarantors, and (B) other Subsidiaries not to exceed Three Hundred Fifty Thousand Dollars ($350,000.00) in the aggregate per fiscal year; and

(j) Investments in joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the licensing of technology, the development of technology or the providing of technical support, as otherwise permitted hereunder, and in which Borrower may invest cash in an amount not greater than Five Hundred Thousand Dollars ($500,000.00) per fiscal year of Borrower.

"**Permitted Licenses**" are (A) licenses of over-the-counter software that is commercially available to the public, and (B) non-exclusive and exclusive licenses for the use of the Intellectual Property of Borrower or any of its

Subsidiaries entered into in the ordinary course of business, provided, that, with respect to each such license described in clause (B), (i) no Event of Default has occurred or is continuing at the time of such license; (ii) the license constitutes an arms-length transaction, the terms of which, on their face, do not provide for a sale or assignment of any Intellectual Property and do not restrict the ability of Borrower or any of its Subsidiaries, as applicable, to pledge, grant a security interest in or lien on, or assign or otherwise Transfer any Intellectual Property; (iii) in the case of any exclusive license, (x) Borrower delivers ten (10) days' prior written notice and a brief summary of the terms of the proposed license to Collateral Agent and the Lenders and delivers to Collateral Agent and the Lenders copies of the final executed licensing documents in connection with the exclusive license promptly upon consummation thereof, and (y) any such license could not result in a legal transfer of title of the licensed property but may be exclusive in respects other than territory and may be exclusive as to territory only as to discrete geographical areas outside of the United States [unless such license is with respect to any specific field of use,, and identified in writing to Collateral Agent as such, in which case it may be exclusive as to territory globally] and (iv) all upfront payments, royalties, milestone payments or other proceeds arising from the licensing agreement that are payable to Borrower or any of its Subsidiaries are paid to a Deposit Account that is governed by a Control Agreement.

"**Permitted Liens**" are:

(a) Liens existing on the Effective Date and disclosed on the Perfection Certificates or arising under this Agreement and the other Loan Documents;

(b) Liens for taxes, fees, assessments or other government charges or levies, either (i) not due and payable or (ii) being contested in good faith and for which Borrower maintains adequate reserves on its Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder;

(c) Liens securing Indebtedness permitted under clause (e) of the definition of "Permitted Indebtedness," provided that (i) such liens exist prior to the acquisition of, or attach substantially simultaneous with, or within twenty (20) days after the, acquisition, lease, repair, improvement or construction of, such property financed or leased by such Indebtedness and (ii) such liens do not extend to any property of Borrower other than the property (and proceeds thereof) acquired, leased or built, or the improvements or repairs, financed by such Indebtedness;

(d) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the ordinary course of business so long as such Liens attach only to Inventory, securing liabilities in the aggregate amount not to exceed One Hundred Fifty Thousand Dollars ($150,000.00), and which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;

(e) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);

(f) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase;

(g) leases or subleases of real property granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), if the leases, subleases, licenses and sublicenses do not prohibit granting Collateral Agent or any Lender a security interest therein;

(h) banker's liens, rights of setoff and Liens in favor of financial institutions incurred in the ordinary course of business arising in connection with Borrower's deposit accounts or securities accounts held at such institutions solely to secure payment of fees and similar costs and expenses and provided such accounts are maintained in compliance with Section 6.6 hereof;

(i) Liens to secure the A/R Line;

(j) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Section 8.4 or 8.7;

(k) Permitted Licenses and deposits to secure Permitted Indebtedness under clauses (f) and (h) thereunder; and

(l) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the Indebtedness may not increase.

"**Permitted Prepayment Mandatory Warrant"** means an additional warrant in form and substance substantially similar to the Warrant issued to Innovatus on the Closing Date, for 3,000,000 shares at an exercise price of $0.078 per share.

"**Permitted Prepayment Reason"** is any of the following occurrences after the first anniversary of the Effective Date but prior to the second anniversary of the Effective Date: (a) any equity event or similar capital raise that would not constitute a Change of Control, (b) entry by Borrower into any joint ventures, licensing, corporate collaboration or similar transactions, whether or not permitted by this Agreement, (c) consummation of a reverse merger, alternative public offering or similar capital market transaction, (d) incurrence of Indebtedness that has a weighted average life (as customarily defined and calculated) lower than the Indebtedness under this Agreement, whether or not permitted by this Agreement, (e) any merger that would not constitute a Change of Control but where the equity interest of Borrower being transferred, exchanged or tendered in connection thereto is greater than twenty percent (20%), (f) the occurrence of an Event of Default, or (g) the occurrence of the Amortization Date.

"**Person**" is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

"**Prepayment Fee**" is, with respect to any Term Loan subject to prepayment prior to the Maturity Date, whether by mandatory or voluntary prepayment, acceleration or otherwise, as indicated, an additional fee payable to the Lenders in amount equal to:

(i) for any voluntary prepayment made on or after the first anniversary of the Effective Date but prior to the second anniversary of the Effective Date, which voluntary prepayment during such period is permitted solely in connection with a Permitted Prepayment Reason, the Prepayment Mandatory Fee plus issuance to Lender on such date of prepayment of the Permitted Prepayment Mandatory Warrant;

(ii) for any prepayment made on or after the second anniversary of the Effective Date through and including the third anniversary of the Effective Date, three percent (3.00%) of the principal amount of the Term Loan prepaid;

(iii) for any prepayment made after the date which is the third anniversary of the Effective Date through and including the date which is the fourth anniversary of the Effective Date, two percent (2.00%) of the principal amount of the Term Loan prepaid; and

(iv) for any prepayment made after the date which is the fourth anniversary of the Effective Date and prior to the Maturity Date, one percent (1.00%) of the principal amount of the Term Loan prepaid;

provided that, for a mandatory prepayment made on or after the Effective Date through and including the second anniversary of the Effective Date, the Prepayment Fee shall be the Prepayment Mandatory Fee.

"**Prepayment Mandatory Fee**" means the amount shown next to the applicable period on Schedule I (Prepayment Mandatory Fee) attached hereto.

"**Property**" means any interest in any kind of property or asset, whether real, personal or mixed, and whether tangible or intangible.

"**Pro Rata Share**" is, as of any date of determination, with respect to each Lender, a percentage (expressed as a decimal, rounded to the ninth decimal place) determined by dividing the outstanding principal amount of the Term Loan held by such Lender by the aggregate outstanding principal amount of the Term Loan.

"**Recipient**" means Collateral Agent or any Lender, as applicable.

"**Registered Organization**" is any "registered organization" as defined in the Code with such additions to such term as may hereafter be made under the Code.

"**Registration**" means any registration, authorization, approval, license, permit, clearance, certificate, and exemption issued or allowed by the FDA or state pharmacy licensing authorities (including, without limitation, new drug applications, abbreviated new drug applications, biologics license applications, investigational new drug applications, over-the-counter drug monograph, device pre-market approval applications, device pre-market notifications, investigational device exemptions, product recertifications, manufacturing approvals, registrations and authorizations, CE Marks, pricing and reimbursement approvals, labeling approvals or their foreign equivalent, controlled substance registrations, and wholesale distributor permits).

"**Regulatory Action**" means an administrative, regulatory, or judicial enforcement action, proceeding, investigation or inspection, FDA Form 483 notice of inspectional observation, warning letter, untitled letter, other notice of violation letter, recall, seizure, Section 305 notice or other similar written communication, injunction or consent decree, issued by the FDA or a federal or state court.

"**Related Persons**" means, with respect to any Person, each Affiliate of such Person and each director, officer, employee, agent, trustee, representative, attorney, accountant and each insurance, environmental, legal, financial and other advisor and other consultants and agents of or to such Person or any of its Affiliates.

"**Required Lenders**" means (i) for so long as all of the Persons that are Lenders on the Effective Date (each an "**Original Lender**") have not assigned or transferred any of their interests in the Term Loan, Lenders holding one hundred percent (100%) of the aggregate outstanding principal balance of the Term Loan, or (ii) at any time from and after any Original Lender has assigned or transferred any interest in its Term Loan, Lenders holding at least fifty one percent (51%) of the aggregate outstanding principal balance of the Term Loan.

"**Requirement of Law**" is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

"**Responsible Officer**" is any of the President, Chief Executive Officer, or Chief Financial Officer of Borrower acting alone.

"**Second Draw Period**" is the period commencing on the date of the occurrence of the Term B Funding Milestones and ending on the earlier of (i) December 31, 2018 and (ii) the occurrence of an Event of Default; provided, however, that the Second Draw Period shall not commence if on the date of the occurrence of the Term B Funding Milestones an Event of Default has occurred.

"**Secured Promissory Note**" is defined in Section 2.6.

"**Secured Promissory Note Record**" is a record maintained by each Lender with respect to the outstanding Obligations owed by Borrower to Lender and credits made thereto.

"**Securities Account**" is any "securities account" as defined in the Code with such additions to such term as may hereafter be made under the Code.

"**Shares**" is (a) one hundred percent (100%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or Borrower's Subsidiary, in any Subsidiary or (b) sixty-five percent (65%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or Borrower's Subsidiary in any Foreign Subsidiary.

"**Solvent**" is, with respect to any Person: the fair salable value of such Person's consolidated assets (including goodwill minus disposition costs) exceeds the fair value of such Person's liabilities; such Person is not left with unreasonably small capital after the transactions in this Agreement; and such Person is able to pay its debts (including trade debts) as they mature in the ordinary course (without taking into account any forbearance and extensions related thereto).

"**Subordinated Debt**" is indebtedness incurred by Borrower or any of its Subsidiaries subordinated to all Indebtedness of Borrower and/or its Subsidiaries to the Lenders (pursuant to a subordination, intercreditor, or other similar agreement in form and substance reasonably satisfactory to Collateral Agent and the Lenders entered into between Collateral Agent, Borrower, and/or any of its Subsidiaries, and the other creditor (each, a "Subordination Agreement")), on terms reasonably acceptable to Collateral Agent and the Lenders. Among other things, the Subordination Agreement shall include an acknowledgement by the holder of Subordinated Debt of the first in priority, senior secured Lien and security interest in all assets of Borrower granted in favor of, and held by, Collateral Agent.

"**Subsidiary**" is, with respect to any Person, any Person of which more than fifty percent (50%) of the voting stock or other equity interests (in the case of Persons other than corporations) is owned or controlled, directly or indirectly, by such Person or through one or more intermediaries. Unless otherwise specified, references herein to a Subsidiary means a Subsidiary of Borrower.

"**Taxes**" is all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

"**Term A Loan**" is defined in Section 2.2(a)(i) hereof.

"**Term B Loan**" is defined in Section 2.2(a)(ii) hereof.

"**Term B Funding Milestones**" means the date upon which both of the following has occurred: (i) the Term B Revenue Milestone; and (ii) the Term B Gross Margin Milestone.

"**Term B Gross Margin Milestone**" means actual minimum trailing twelve (12) month gross margin, measured as of the last day of the month ending immediately prior to the Funding Date of the Term B Loan, greater than fifty percent (50.00%); written evidence of which (including Borrower's unaudited financial statements) is provided, and is in form and content reasonably acceptable, to Collateral Agent and the Lenders prior to the Funding Date of the Term B Loan.

"**Term B Revenue Milestone**" means actual minimum trailing twelve (12) month revenue under GAAP, measured as of the last day of the month ending immediately prior to the Funding Date of the Term B Loan, greater than Thirty Million Dollars ($30,000,000.00); written evidence of which (including Borrower's unaudited financial statements) is provided, and is in form and content reasonably acceptable, to Collateral Agent and the Lenders prior to the Funding Date of the Term B Loan.

"**Term Loan**" is defined in Section 2.2(a)(ii) hereof.

"**Term Loan Commitment**" is, for any Lender, the obligation of such Lender to make the Term Loan, up to the principal amount shown on Schedule 1.1. "**Term Loan Commitments**" means the aggregate amount of such commitments of all Lenders.

"**Trademarks**" means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower and each of its Subsidiaries connected with and symbolized by such trademarks.

"**U.S. Person**" shall mean any Person that is a "United States person" as defined in Section 7701(a)(30) of the IRC.

"**Withholding Agent**" is Borrower or Collateral Agent, as the context dictates.

"**Warrant**" means any of that certain Warrant to Purchase Stock dated the Effective Date issued by Borrower in favor of each Lender or such Lender's Affiliates or any other warrant entered into in connection with the Term Loan, all as may be amended, restated, or otherwise modified or supplemented from time to time.

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IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

BORROWER:

EXAGEN DIAGNOSTICS, INC.

/s/ Kamal Adawi
Name: Kamal Adawi
Title: CFO

[Signature Page to Loan and Security Agreement]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

COLLATERAL AGENT AND LENDER:

INNOVATUS LIFE SCIENCES LENDING FUND I, LP

By: Innovatus Life Sciences GP, LP
Its: General Partner

/s/ Andrew Hobson
Name: Andrew Hobson
Title: Authorized Signatory

SCHEDULE 1.1

Lenders and Commitments

Term A Loans

Lender	Term Loan Commitment	Commitment Percentage
INNOVATUS LIFE SCIENCES LENDING FUND I, LP	$20,000,000.00	100.00%
TOTAL	**$20,000,000.00**	**100.00%**

Term B Loans

Lender	Term Loan Commitment	Commitment Percentage
INNOVATUS LIFE SCIENCES LENDING FUND I, LP	$5,000,000.00	100.00%
TOTAL	**$5,000,000.00**	**100.00%**

Aggregate (all Term Loans)

Lender	Term Loan Commitment	Commitment Percentage
INNOVATUS LIFE SCIENCES LENDING FUND I, LP	$25,000,000.00	100.00%
TOTAL	**$25,000,000.00**	**100.00%**

EXHIBIT A

Description of Collateral

The Collateral consists of all of Borrower's right, title and interest in and to the following property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (including Intellectual Property), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

All Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) more than sixty five percent (65%) of the total combined voting power of all classes of stock entitled to vote the shares of capital stock (the "Shares") of any Foreign Subsidiary, if Borrower demonstrates to Collateral Agent's reasonable satisfaction that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code; (ii) any license or contract, in each case if the granting of a Lien in such license or contract is prohibited by or would constitute a default under the agreement governing such license or contract (but (A) only to the extent such prohibition is enforceable under applicable law and (B) other than to the extent that any such term would be rendered ineffective pursuant to Sections 9-406, 9-408 or 9-409 (or any other Section) of Division 9 of the Code); provided that upon the termination, lapsing or expiration of any such prohibition, such license or contract, as applicable, shall automatically be subject to the security interest granted in favor of Collateral Agent hereunder and become part of the "Collateral;" or (iii) intent-to-use trademarks or service mark applications, to the extent that, and solely during the period in which, the grant of a security interest therein would impair the validity or enforceability of such intent-to-use trademarks or service mark applications under applicable law.

ANNEX I

Collateral Agent and Lender Terms

1. Appointment of Collateral Agent.

(a) Each Lender hereby appoints INNOVATUS LIFE SCIENCES LENDING FUND I, LP (together with any successor Collateral Agent pursuant to Section 7 of this Annex I) as Collateral Agent under the Loan Documents and authorizes Collateral Agent to (i) execute and deliver the Loan Documents and accept delivery thereof on its behalf from Borrower, (ii) take such action on its behalf and to exercise all rights, powers and remedies and perform the duties as are expressly delegated to Collateral Agent under such Loan Documents and (iii) exercise such powers as are reasonably incidental thereto.

(b) Without limiting the generality of clause (a) above, Collateral Agent shall have the sole and exclusive right and authority (to the exclusion of the Lenders), and is hereby authorized, to (i) act as the disbursing and collecting agent for the Lenders with respect to all payments and collections arising in connection with the Loan Documents (including in any other bankruptcy, insolvency or similar proceeding), and each Person making any payment in connection with any Loan Document to any Lender is hereby authorized to make such payment to Collateral Agent, (ii) file and prove claims and file other documents necessary or desirable to allow the claims of Collateral Agent and Lenders with respect to any Obligation in any bankruptcy, insolvency or similar proceeding (but not to vote, consent or otherwise act on behalf of such Lender), (iii) act as collateral agent for Collateral Agent and each Lender for purposes of the perfection of all Liens created by the Loan Documents and all other purposes stated therein, (iv) manage, supervise and otherwise deal with the Collateral, (v) take such other action as is necessary or desirable to maintain the perfection and priority of the Liens created or purported to be created by the Loan Documents, (vi) except as may be otherwise specified in any Loan Document, exercise all remedies given to Collateral Agent and the other Lenders with respect to the Borrower and/or the Collateral, whether under the Loan Documents, applicable Requirements of Law or otherwise and (vii) execute any amendment, consent or waiver under the Loan Documents on behalf of any Lender that has consented in writing to such amendment, consent or waiver; provided, however, that Collateral Agent hereby appoints, authorizes and directs each Lender to act as collateral sub-agent for Collateral Agent and the Lenders for purposes of the perfection of all Liens with respect to the Collateral, including any Deposit Account maintained by Borrower with, and cash and Cash Equivalents held by, such Lender, and may further authorize and direct the Lenders to take further actions as collateral sub-agents for purposes of enforcing such Liens or otherwise to transfer the Collateral subject thereto to Collateral Agent, and each Lender hereby agrees to take such further actions to the extent, and only to the extent, so authorized and directed. Collateral Agent may, upon any term or condition it specifies, delegate or exercise any of its rights, powers and remedies under, and delegate or perform any of its duties or any other action with respect to, any Loan Document by or through any trustee, co-agent, employee, attorney-in-fact and any other Person (including any Lender). Any such Person shall benefit from this Annex I to the extent provided by Collateral Agent.

(c) Under the Loan Documents, Collateral Agent (i) is acting solely on behalf of the Lenders, with duties that are entirely administrative in nature, notwithstanding the use of the defined term “Collateral Agent”, the terms “agent”, “Collateral Agent” and “collateral agent” and similar terms in any Loan Document to refer to Collateral Agent, which terms are used for title purposes only, (ii) is not assuming any obligation under any Loan Document other than as expressly set forth therein or any role as agent, fiduciary or trustee of or for any Lender or any other Person and (iii) shall have no implied functions, responsibilities, duties, obligations or other liabilities under any Loan Document, and each Lender, by accepting the benefits of the Loan Documents, hereby waives and agrees not to assert any claim against Collateral Agent based on the roles, duties and legal relationships expressly disclaimed in clauses (i) through (iii) above. Except as expressly set forth in the Loan Documents, Collateral Agent shall not have any duty to disclose, and shall not be liable for failure to disclose, any information relating to Borrower or any of its Subsidiaries that is communicated to or obtained by any other Lender or any of its Affiliates in any capacity.

2. Binding Effect; Use of Discretion; E-Systems.

(a) Each Lender, by accepting the benefits of the Loan Documents, agrees that (i) any action taken by Collateral Agent or Required Lenders (or, if expressly required in any Loan Document, a greater proportion

of the Lenders) in accordance with the provisions of the Loan Documents, (ii) any action taken by Collateral Agent in reliance upon the instructions of Required Lenders (or, where so required, such greater proportion) and (iii) the exercise by Collateral Agent or Required Lenders (or, where so required, such greater proportion) of the powers set forth herein or therein, together with such other powers as are reasonably incidental thereto, shall be authorized and binding upon all of Lenders.

(b) If Collateral Agent shall request instructions from Required Lenders or all affected Lenders with respect to any act or action (including failure to act) in connection with any Loan Document, then Collateral Agent shall be entitled to refrain from such act or taking such action unless and until Collateral Agent shall have received instructions from Required Lenders or all affected Lenders, as the case may be, and Collateral Agent shall not incur liability to any Person by reason of so refraining. Collateral Agent shall be fully justified in failing or refusing to take any action under any Loan Document (i) if such action would, in the opinion of Collateral Agent, be contrary to any Requirement of Law or any Loan Document, (ii) if such action would, in the opinion of Collateral Agent, expose Collateral Agent to any potential liability under any Requirement of Law or (iii) if Collateral Agent shall not first be indemnified to its satisfaction against any and all liability and expense which may be incurred by it by reason of taking or continuing to take any such action. Without limiting the foregoing, no Lender shall have any right of action whatsoever against Collateral Agent as a result of Collateral Agent acting or refraining from acting under any Loan Document in accordance with the instructions of Required Lenders or all affected Lenders, as applicable.

(c) Collateral Agent is hereby authorized by Borrower and each Lender to establish procedures (and to amend such procedures from time to time) to facilitate administration and servicing of the Term Loan and other matters incidental thereto. Without limiting the generality of the foregoing, Collateral Agent is hereby authorized to establish procedures to make available or deliver, or to accept, notices, documents (including, without limitation, borrowing base certificates) and similar items on, by posting to or submitting and/or completion, on E-Systems. Borrower and each Lender acknowledges and agrees that the use of transmissions via an E-System or electronic mail is not necessarily secure and that there are risks associated with such use, including risks of interception, disclosure and abuse, and Borrower and each Lender assumes and accepts such risks by hereby authorizing the transmission via E-Systems or electronic mail. Each “e-signature” on any such posting shall be deemed sufficient to satisfy any requirement for a “signature”, and each such posting shall be deemed sufficient to satisfy any requirement for a “writing”, in each case including pursuant to any Loan Document, any applicable provision of any Code, the federal Uniform Electronic Transactions Act, the Electronic Signatures in Global and National Commerce Act and any substantive or procedural Requirement of Law governing such subject matter. All uses of an E-System shall be governed by and subject to, in addition to this Section, the separate terms, conditions and privacy policy posted or referenced in such E-System (or such terms, conditions and privacy policy as may be updated from time to time, including on such E-System) and related contractual obligations executed by Collateral Agent, Borrower and/or Lenders in connection with the use of such E-System. ALL E-SYSTEMS AND ELECTRONIC TRANSMISSIONS SHALL BE PROVIDED “AS IS” AND “AS AVAILABLE”. NO REPRESENTATION OR WARRANTY OF ANY KIND IS MADE BY AGENT, ANY LENDER OR ANY OF THEIR RELATED PERSONS IN CONNECTION WITH ANY E-SYSTEMS.

3. Collateral Agent’s Reliance, Etc. Collateral Agent may, without incurring any liability hereunder, (a) consult with any of its Related Persons and, whether or not selected by it, any other advisors, accountants and other experts (including advisors to, and accountants and experts engaged by, Borrower) and (b) rely and act upon any document and information (including those transmitted by electronic transmission) and any telephone message or conversation, in each case believed by it to be genuine and transmitted, signed or otherwise authenticated by the appropriate parties. None of Collateral Agent and its Related Persons shall be liable for any action taken or omitted to be taken by any of them under or in connection with any Loan Document, and each Lender and Borrower hereby waives and shall not assert (and Borrower shall cause its Subsidiaries to waive and agree not to assert) any right, claim or cause of action based thereon, except to the extent of liabilities resulting from the gross negligence or willful misconduct of Collateral Agent or, as the case may be, such Related Person (each as determined in a final, non-appealable judgment of a court of competent jurisdiction) in connection with the duties of Collateral Agent expressly set forth herein. Without limiting the foregoing, Collateral Agent: (i) shall not be responsible or otherwise incur liability for any action or omission taken in reliance upon the instructions of the Required Lenders or for the actions or omissions of any of its Related Persons, except to the extent that a court of competent jurisdiction determines in a final non-appealable judgment that Collateral Agent acted with gross

negligence or willful misconduct in the selection of such Related Person; (ii) shall not be responsible to any Lender or other Person for the due execution, legality, validity, enforceability, effectiveness, genuineness, sufficiency or value of, or the attachment, perfection or priority of any Lien created or purported to be created under or in connection with, any Loan Document; (iii) makes no warranty or representation, and shall not be responsible, to any Lender or other Person for any statement, document, information, representation or warranty made or furnished by or on behalf of Borrower or any Related Person of Borrower in connection with any Loan Document or any transaction contemplated therein or any other document or information with respect to Borrower, whether or not transmitted or (except for documents expressly required under any Loan Document to be transmitted to the Lenders) omitted to be transmitted by Collateral Agent, including as to completeness, accuracy, scope or adequacy thereof, or for the scope, nature or results of any due diligence performed by Collateral Agent in connection with the Loan Documents; and (iv) shall not have any duty to ascertain or to inquire as to the performance or observance of any provision of any Loan Document, whether any condition set forth in any Loan Document is satisfied or waived, as to the financial condition of Borrower or as to the existence or continuation or possible occurrence or continuation of any Event of Default, and shall not be deemed to have notice or Knowledge of such occurrence or continuation unless it has received a notice from Borrower or any Lender describing such Event of Default that is clearly labeled "notice of default" (in which case Collateral Agent shall promptly give notice of such receipt to all Lenders, provided that Collateral Agent shall not be liable to any Lender for any failure to do so, except to the extent that such failure is attributable to Collateral Agent's gross negligence or willful misconduct as determined by a final non- appealable judgment of a court of competent jurisdiction); and, for each of the items set forth in clauses (i) through (iv) above, each Lender and Borrower hereby waives and agrees not to assert (and Borrower shall cause its Subsidiaries to waive and agree not to assert) any right, claim or cause of action it might have against Collateral Agent based thereon.

4. Collateral Agent Individually. Collateral Agent and its Affiliates may make loans and other extensions of credit to, acquire stock and stock equivalents of, engage in any kind of business with, Borrower or any Affiliate of Borrower as though it were not acting as Collateral Agent and may receive separate fees and other payments therefor. To the extent Collateral Agent or any of its Affiliates makes the Term Loan or otherwise becomes a Lender hereunder, it shall have and may exercise the same rights and powers hereunder and shall be subject to the same obligations and liabilities as any other Lender and the terms "Lender", "Required Lender" and any similar terms shall, except where otherwise expressly provided in any Loan Document, include, without limitation, Collateral Agent or such Affiliate, as the case may be, in its individual capacity as Lender, or as one of the Required Lenders.

5. Lender Credit Decision; Collateral Agent Report. Each Lender acknowledges that it shall, independently and without reliance upon Collateral Agent, any Lender or any of their Related Persons or upon any document solely or in part because such document was transmitted by Collateral Agent or any of its Related Persons, conduct its own independent investigation of the financial condition and affairs of Borrower and make and continue to make its own credit decisions in connection with entering into, and taking or not taking any action under, any Loan Document or with respect to any transaction contemplated in any Loan Document, in each case based on such documents and information as it shall deem appropriate. Except for documents expressly required by any Loan Document to be transmitted by Collateral Agent to the Lenders, Collateral Agent shall not have any duty or responsibility to provide any Lender with any credit or other information concerning the business, prospects, operations, Property, financial and other condition or creditworthiness of Borrower or any Affiliate of Borrower that may come in to the possession of Collateral Agent or any of its Related Persons. Each Lender agrees that is shall not rely on any field examination, audit or other report provided by Collateral Agent or its Related Persons (a "**Collateral Agent Report**"). Each Lender further acknowledges that any Collateral Agent Report (a) is provided to the Lenders solely as a courtesy, without consideration, and based upon the understanding that such Lender will not rely on such Collateral Agent Report, (b) was prepared by Collateral Agent or its Related Persons based upon information provided by Borrower solely for Collateral Agent's own internal use, and (c) may not be complete and may not reflect all information and findings obtained by Collateral Agent or its Related Persons regarding the operations and condition of Borrower. Neither Collateral Agent nor any of its Related Persons makes any representations or warranties of any kind with respect to (i) any existing or proposed financing, (ii) the accuracy or completeness of the information contained in any Collateral Agent Report or in any related documentation, (iii) the scope or adequacy of Collateral Agent's and its Related Persons' due diligence, or the presence or absence of any errors or omissions contained in any Collateral Agent Report or in any related documentation, and (iv) any work performed by Collateral Agent or Collateral Agent's Related Persons in connection with or using any Collateral

Agent Report or any related documentation. Neither Collateral Agent nor any of its Related Persons shall have any duties or obligations in connection with or as a result of any Lender receiving a copy of any Collateral Agent Report. Without limiting the generality of the forgoing, neither Collateral Agent nor any of its Related Persons shall have any responsibility for the accuracy or completeness of any Collateral Agent Report, or the appropriateness of any Collateral Agent Report for any Lender's purposes, and shall have no duty or responsibility to correct or update any Collateral Agent Report or disclose to any Lender any other information not embodied in any Collateral Agent Report, including any supplemental information obtained after the date of any Collateral Agent Report. Each Lender releases, and agrees that it will not assert, any claim against Collateral Agent or its Related Persons that in any way relates to any Collateral Agent Report or arises out of any Lender having access to any Collateral Agent Report or any discussion of its contents, and agrees to indemnify and hold harmless Collateral Agent and its Related Persons from all claims, liabilities and expenses relating to a breach by any Lender arising out of such Lender's access to any Collateral Agent Report or any discussion of its contents.

6. Indemnification. Each Lender agrees to reimburse Collateral Agent and each of its Related Persons (to the extent not reimbursed by Borrower as required under the Loan Documents) promptly upon demand for its Pro Rata Share of any out-of-pocket costs and expenses (including, without limitation, fees, charges and disbursements of financial, legal and other advisors and any taxes or insurance paid in the name of, or on behalf of, Borrower) incurred by Collateral Agent or any of its Related Persons in connection with the preparation, syndication, execution, delivery, administration, modification, amendment, consent, waiver or enforcement of, or the taking of any other action (whether through negotiations, through any work-out, bankruptcy, restructuring or other legal or other proceeding (including, without limitation, preparation for and/or response to any subpoena or request for document production relating thereto) or otherwise) in respect of, or legal advice with respect to, its rights or responsibilities under, any Loan Document. Each Lender further agrees to indemnify Collateral Agent and each of its Related Persons (to the extent not reimbursed by Borrower as required under the Loan Documents), ratably according to its Pro Rata Share, from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever (including, to the extent not indemnified by the applicable Lender, taxes, interests and penalties imposed for not properly withholding or backup withholding on payments made to or for the account of any Lender) that may be imposed on, incurred by, or asserted against Collateral Agent or any of its Related Persons in any matter relating to or arising out of, in connection with or as a result of any Loan Document or any other act, event or transaction related, contemplated in or attendant to any such document, or, in each case, any action taken or omitted to be taken by Collateral Agent or any of its Related Persons under or with respect to the foregoing; provided that no Lender shall be liable to Collateral Agent or any of its Related Persons under this Section 6 of this Annex I to the extent such liability has resulted from the gross negligence or willful misconduct of Collateral Agent or, as the case may be, such Related Person, as determined by a final non-appealable judgment of a court of competent jurisdiction. To the extent required by any applicable Requirement of Law, Collateral Agent may withhold from any payment to any Lender under a Loan Document an amount equal to any applicable withholding tax. If the Internal Revenue Service or any other Governmental Authority asserts a claim that Collateral Agent did not properly withhold tax from amounts paid to or for the account of any Lender for any reason, or if Collateral Agent reasonably determines that it was required to withhold taxes from a prior payment to or for the account of any Lender but failed to do so, such Lender shall promptly indemnify Collateral Agent fully for all amounts paid, directly or indirectly, by Collateral Agent as tax or otherwise, including penalties and interest, and together with all expenses incurred by Collateral Agent. Collateral Agent may offset against any payment to any Lender under a Loan Document, any applicable withholding tax that was required to be withheld from any prior payment to such Lender but which was not so withheld, as well as any other amounts for which Collateral Agent is entitled to indemnification from such Lender under the immediately preceding sentence of this Section 6 of this Annex I.

7. Successor Collateral Agent. Collateral Agent may resign at any time by delivering notice of such resignation to the Lenders and Borrower, effective on the date set forth in such notice or, if no such date is set forth therein, upon the date such notice shall be effective, in accordance with the terms of this Section 7 of this Annex I. If Collateral Agent delivers any such notice, the Required Lenders shall have the right to appoint a successor Collateral Agent. If, after 30 days after the date of the retiring Collateral Agent's notice of resignation, no successor Collateral Agent has been appointed by the Required Lenders that has accepted such appointment, then the retiring Collateral Agent may, on behalf of the Lenders, appoint a successor Collateral Agent from among the Lenders. Effective immediately upon its resignation, (a) the retiring Collateral Agent shall be discharged from its duties and obligations under the Loan Documents, (b) the Lenders shall assume and perform all of the duties of

Collateral Agent until a successor Collateral Agent shall have accepted a valid appointment hereunder, (c) the retiring Collateral Agent and its Related Persons shall no longer have the benefit of any provision of any Loan Document other than with respect to any actions taken or omitted to be taken while such retiring Collateral Agent was, or because such Collateral Agent had been, validly acting as Collateral Agent under the Loan Documents, and (iv) subject to its rights under Section 2(b) of this Annex I, the retiring Collateral Agent shall take such action as may be reasonably necessary to assign to the successor Collateral Agent its rights as Collateral Agent under the Loan Documents. Effective immediately upon its acceptance of a valid appointment as Collateral Agent, a successor Collateral Agent shall succeed to, and become vested with, all the rights, powers, privileges and duties of the retiring Collateral Agent under the Loan Documents.

8. Release of Collateral. Each Lender hereby consents to the release and hereby directs Collateral Agent to release (or in the case of clause (b) (ii) below, release or subordinate) the following:

(a) any Guarantor or Subsidiary "co-Borrower" if all of the stock of such Subsidiary owned by Borrower is sold or transferred in a transaction permitted under the Loan Documents (including pursuant to a valid waiver or consent), to the extent that, after giving effect to such transaction, such Subsidiary would not be required to guaranty any Obligations pursuant to any Loan Document; and

(b) any Lien held by Collateral Agent for the benefit of itself and the Lenders against (i) any Collateral that is sold or otherwise disposed of by Borrower in a transaction permitted by the Loan Documents (including pursuant to a valid waiver or consent), (ii) any Collateral subject to a Lien that is expressly permitted under clause (c) of the definition of the term "Permitted Lien" and (iii) all of the Collateral and Borrower, upon (A) termination of all of the Commitments, (B) payment in full in cash of all of the Obligations that Collateral Agent has theretofore been notified in writing by the holder of such Obligation are then due and payable, and (C) to the extent requested by Collateral Agent, receipt by Collateral Agent and Lenders of liability releases from Borrower in form and substance acceptable to Collateral Agent (the satisfaction of the conditions in this clause (iii), the "**Termination Date**").

9. Setoff and Sharing of Payments. In addition to any rights now or hereafter granted under any applicable requirement of law and not by way of limitation of any such rights, upon the occurrence and during the continuance of any Event of Default and subject to Section 10(d) of this Annex I, each Lender is hereby authorized at any time or from time to time upon the direction of Collateral Agent, without notice to Borrower or any other Person, any such notice being hereby expressly waived, to setoff and to appropriate and to apply any and all balances held by it at any of its offices for the account of Borrower (regardless of whether such balances are then due to Borrower) and any other properties or assets at any time held or owing by that Lender or that holder to or for the credit or for the account of Borrower against and on account of any of the Obligations that are not paid when due. Any Lender exercising a right of setoff or otherwise receiving any payment on account of the Obligations in excess of its Pro Rata Share thereof shall purchase for cash (and the other Lenders or holders shall sell) such participations in each such other Lender's or holder's Pro Rata Share of the Obligations as would be necessary to cause such Lender to share the amount so offset or otherwise received with each other Lender or holder in accordance with their respective Pro Rata Shares of the Obligations. Borrower agrees, to the fullest extent permitted by law, that (a) any Lender may exercise its right to offset with respect to amounts in excess of its Pro Rata Share of the Obligations and may purchase participations in accordance with the preceding sentence and (b) any Lender so purchasing a participation in the Term Loan made or other Obligations held by other Lenders or holders may exercise all rights of offset, bankers' lien, counterclaim or similar rights with respect to such participation as fully as if such Lender or holder were a direct holder of the Term Loan and the other Obligations in the amount of such participation. Notwithstanding the foregoing, if all or any portion of the offset amount or payment otherwise received is thereafter recovered from the Lender that has exercised the right of offset, the purchase of participations by that Lender shall be rescinded and the purchase price restored without interest.

10. Advances; Payments; Non-Funding Lenders; Actions in Concert.

(a) Advances; Payments. If Collateral Agent receives any payment with respect to the Term Loan for the account of Lenders on or prior to 2:00 p.m. (New York time) on any Business Day, Collateral Agent shall pay to each applicable Lender such Lender's Pro Rata Share of such payment on such Business Day. If Collateral Agent receives any payment with respect to the Term Loan for the account of Lenders after 2:00 p.m.

(New York time) on any Business Day, Collateral Agent shall pay to each applicable Lender such Lender's Pro Rata Share of such payment on the next Business Day.

(b) Return of Payments.

(i) If Collateral Agent pays an amount to a Lender under this Agreement in the belief or expectation that a related payment has been or will be received by Collateral Agent from Borrower and such related payment is not received by Collateral Agent, then Collateral Agent will be entitled to recover such amount (including interest accruing on such amount at the rate otherwise applicable to such Obligation) from such Lender on demand without setoff, counterclaim or deduction of any kind.

(ii) If Collateral Agent determines at any time that any amount received by Collateral Agent under any Loan Document must be returned to Borrower or paid to any other Person pursuant to any insolvency law or otherwise, then, notwithstanding any other term or condition of any Loan Document, Collateral Agent will not be required to distribute any portion thereof to any Lender. In addition, each Lender will repay to Collateral Agent on demand any portion of such amount that Collateral Agent has distributed to such Lender, together with interest at such rate, if any, as Collateral Agent is required to pay to Borrower or such other Person, without setoff, counterclaim or deduction of any kind and Collateral Agent will be entitled to set off against future distributions to such Lender any such amounts (with interest) that are not repaid on demand.

(c) Non-Funding Lenders.

(i) Unless Collateral Agent shall have received notice from a Lender prior to the date of any Term Loan that such Lender will not make available to Collateral Agent such Lender's Pro Rata Share of such Term Loan, Collateral Agent may assume that such Lender will make such amount available to it on the date of such Term Loan in accordance with Section 2(b) of this Annex I, and Collateral Agent may (but shall not be obligated to), in reliance upon such assumption, make available a corresponding amount for the account of Borrower on such date. If and to the extent that such Lender shall not have made such amount available to Collateral Agent, such Lender and Borrower severally agree to repay to Collateral Agent forthwith on demand such corresponding amount together with interest thereon, for each day from the day such amount is made available to Borrower until the day such amount is repaid to Collateral Agent, at a rate per annum equal to the interest rate applicable to the Obligation that would have been created when Collateral Agent made available such amount to Borrower had such Lender made a corresponding payment available. If such Lender shall repay such corresponding amount to Collateral Agent, the amount so repaid shall constitute such Lender's portion of such Term Loan for purposes of this Agreement.

(ii) To the extent that any Lender has failed to fund any Term Loan or any other payments required to be made by it under the Loan Documents after any such Term Loan is required to be made or such payment is due (a "**Non-Funding Lender**"), Collateral Agent shall be entitled to set off the funding short-fall against that Non-Funding Lender's Pro Rata Share of all payments received from Borrower. The failure of any Non-Funding Lender to make any Term Loan or any payment required by it hereunder shall not relieve any other Lender (each such other Lender, an "**Other Lender**") of its obligations to make such Term Loan, but neither any Other Lender nor Collateral Agent shall be responsible for the failure of any Non-Funding Lender to make such Term Loan or make any other payment required hereunder. Notwithstanding anything set forth herein to the contrary, a Non-Funding Lender shall not have any voting or consent rights under or with respect to any Loan Document or constitute a "Lender" (or be included in the calculation of "Required Lender" hereunder) for any voting or consent rights under or with respect to any Loan Document. At Borrower's request, Collateral Agent or a Person reasonably acceptable to Collateral Agent shall have the right with Collateral Agent's consent and in Collateral Agent's sole discretion (but Collateral Agent or any such Person shall have no obligation) to purchase from any Non-Funding Lender, and each Lender agrees that if it becomes a Non-Funding Lender it shall, at Collateral Agent's request, sell and assign to Collateral Agent or such Person, all of the Term Loan Commitment (if any), and all of the outstanding Term Loan of that Non-Funding Lender for an amount equal to the aggregate outstanding principal balance of the Term Loan held by such Non-Funding Lender and all accrued interest with respect thereto through the date of sale, such purchase and sale to be consummated pursuant to an executed assignment agreement in form and substance reasonably satisfactory to, and acknowledged by, Collateral Agent.

(d) Actions in Concert. Anything in this Agreement to the contrary notwithstanding, each Lender hereby agrees with each other Lender that no Lender shall take any action to protect or enforce its rights arising out of any Loan Document (including exercising any rights of setoff) without first obtaining the prior written consent of Collateral Agent or Required Lenders, it being the intent of Lenders that any such action to protect or enforce rights under any Loan Document shall be taken in concert and at the direction or with the consent of Collateral Agent or Required Lenders.

eXagen™ DIAGNOSTICS

October 12, 2010

Thierry Dervieux
240 Coral Rose
Irvine, CA 92603

Dear Thierry,

I am confirming our offer for you to join Exagen Diagnostics, Inc. as Vice President R&D and Chief Development Officer, with a start date of November 1, 2010. We are offering you an annual salary of $240,000 per year, reimbursement of your moving expenses up to $5,000 and a bonus of $50,000 to be paid when you and your family permanently reside in Albuquerque which must occur on or before June 1, 2011. In addition you will be eligible for the management bonus plan during the year 2011. Your bonus goals and payments will be defined and approved by the board of directors prior to the end of this year. Pending approval by the Exagen Board of Directors, you will also receive options to purchase 100,000 shares Exagen common stock, to vest in 4 annual portions beginning on the first anniversary date of your employment, at a strike price of $0.28 per share. Such options will become fully vested upon the acquisition of the company and your employment ceases, for no cause of your own.

You will be eligible to participate in the Exagen benefits program, a summary of which you will receive under separate cover. Exagen currently has a safe harbor 401K plan and contributes an amount equal to 3% of your annual income into your 401K. There is no vesting period in the 401(k). In addition, you will accrue 4 weeks (or 120 hours) of paid time off a year in addition to the ten holidays currently recognized by Exagen.

You will become eligible to participate in the Exagen benefits program on the first day of the months following your hire date. With a start date of November 1, 2010, your eligibility date for benefits is December 1, 2010. You will receive the benefits enrollment information upon written acceptance of the offer.

If you are terminated for other than cause you will receive severance payments as follows:

1) From your start date to one year of employment: 6 months of base salary.
2) From 1 year to 2 years of employment: 9 months of base salary.
3) Greater than 2 years of employment: 12 months of base salary.

Employment at Will: This letter is intended to communicate certain terms and conditions of employment with Exagen Diagnostics, Inc. but is not intended to be and should not be considered an employment contract. Your employment is not for a specific duration and may be terminated by you or Exagen Diagnostics, Inc. at anytime, for any reason or for no reason whatsoever, with or without notice and with or without cause unless otherwise specified by law. Your employment is “at will.” The “at will” status of your employment may not be altered except by a separate written contract signed by the Chief Executive Officer of Exagen Diagnostics, Inc. No one other than the Chief Executive Officer has the authority to enter into an employment contract with you.

You will enter into an employee confidentiality and invention agreement effective during your period of employment. You will enter into an agreement with the company for a license to your provisional patents for methotrexate and thiopuriene under mutually agreed upon terms.

We recognize that you will be working with the company between now and your official start date. For these efforts the company will pay you $112.50/hour or $900/day as a private contractor.

We look forward to working with you as a member of the Exagen team. We are excited about the contributions you will make to the success of our company. If you have any further questions, please do not hesitate to contact me.

Sincerely

/s/ Scott Glenn
Scott Glenn
Chief Executive Officer

I Accept the Offer Stated Above

/s/ Thierry Dervieux
Thierry Dervieux

Patient focused. Discovery driven.

September 9, 2011

Thierry Dervieux
240 Coral Rose
Irvine, CA 92603

Dear Thierry,

We would like to confirm the following contingent upon Board of Director approval the following modifications to your employment with Exagen Diagnostics Inc. You have signed our offer letter dated October 12, 2011 and an Employment Agreement date 10-31-10, both attached. We would like to add the following stipulation:

Termination of your employment by you for "Good Reason"

"Good Reason" shall mean the occurrence of any of the following events without your consent;

a) A material reduction in your duties or responsibilities following the date of this amendment.

b) The relocation of the company's principal business location to a point more than two hundred and fifty (250) miles East of its current Albuquerque location or more than one thousand (1000) miles from your principal residence.

c) A material reduction by the company of your base salary as defined in your offer letter, as the result of a company-wide compensation reduction or in connection with similar decreases for the management team of the company.

In the event you terminate your employment for Good reasons as defined above, then the Company shall pay to you: i) any bonus awarded not previously paid, and any accrued and unused vacation benefits. and ii) Severance pay in the form of a lump sum payment equal to 9 months of base salary and 12 months of base salary one year following the date of this amendment, provided however, that any resignation by you due to any of the following conditions shall only be deemed for Good Reason if: (i) you give the company written notice of the intent to terminate for Good Reason within ninety (90) days following the first occurrence of the condition(s) that you believe constitutes Good Reason, which notice shall describe such condition(s); (ii) the Company fails to remedy, if remediable, such condition(s) within thirty (30) days following receipt of the written notice (the "Cure

Period") of such condition(s) from you; and (iii) you actually resign your employment within the first fifteen (60) days after expiration of the Cure Period.

Allowance: The company agrees to reimburse you for all reasonable travel expenses and accommodations associated with your commute to the company. Since the company's offices are an extended distance from your principal residence, the company will allow you to work from your Principal residence up to 50% of the time.

Relocation: If at a later date you and your family decide to relocate to less than (30) miles from the company's offices the company agrees to reimburse you for all moving expenses. In addition the company agrees to award you a fifty thousand ($50,000) relocation bonus payable within thirty days (30) after your permanent move.

Best Regards,

/s/ Scott L. Glenn
Scott L. Glenn
Chairman/CEO

Attachments:
Offer Letter
Employment Agreement