

Precipio, Inc.

Form 424B5

February 09, 2018

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Filed Pursuant to Rule 424(b)(5)

Registration No. 333-201907

PROSPECTUS SUPPLEMENT

(To the Prospectus dated February 13, 2015)

Up to \$8,000,000

Common Stock

We have entered into an Equity Purchase Agreement with Leviston Resources LLC, or the Investor, relating to shares of our common stock offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of such agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$8,000,000, or the Aggregate Amount, from time to time to the Investor.

Our common stock is listed on the NASDAQ Capital Market under the symbol "PRPO." On February 8, 2018, the last reported sale price of our common stock on the NASDAQ Capital Market was \$1.04 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made in sales deemed to be "at-the-market" equity offerings as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, or the Securities Act, at a purchase price equal to 97.25% of the volume weighted average sales price of the common stock reported on the date that the Investor receives a capital call from us. The Investor has agreed to make an initial investment of \$750,000 following the close of business on February 9, 2018 at a price of \$1.04 per share.

We estimate that the total gross proceeds from this offering will be approximately \$8.0 million. We estimate the total expenses of this offering, excluding the discount to the Investor, will be approximately \$0.6 million of which \$0.4 million will be paid in stock. As consideration for the Investor entering into the Equity Purchase Agreement, we have agreed to pay to the Investor a commitment fee in shares of our common stock equal in value to 5.25% of the total Aggregate Amount, payable as follows: 1.75% before February 12, 2018; 1.75% on the third calendar day after the date on which the registration statement on Form S-1 that we plan to file with the SEC is declared effective by the SEC; and 1.75% on the thirtieth calendar day after the date on which such registration statement on Form S-1 is declared effective by the SEC.

We have agreed to pay to the Investor, on each day the Investor receives a capital call from us, all expenses associated with depositing, clearing, selling and mailing of the stock certificates, a fee of .75% of any amount purchased by the Investor. In addition we have agreed to reimburse \$35,000 to the Investor for a documentation fee for preparing the equity purchase agreement, of which \$15,000 will be refunded by the Investor on the earlier of 60 days after the signing of the equity purchase agreement and the third purchase by the Investor under the equity purchase agreement. The Investor may be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation and discounts received by the Investor will be deemed to be underwriting commissions or discounts.

Investing in our securities involves a high degree of risk. Please read the information contained in and incorporated by reference under the heading "Risk Factors" beginning on page S-9 of this prospectus supplement, and under similar heading in the other documents that are filed after the date hereof and incorporated by reference into this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete.

Any representation to the contrary is a criminal offense.

February 8, 2018.

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You should rely only on the information contained in or incorporated by reference into this prospectus supplement and the accompanying base prospectus and any free writing prospectuses prepared by us or on our behalf. We have not authorized any person to provide any information or make any statement that differs from what is contained in this prospectus supplement, the accompanying base prospectus and any free writing prospectuses prepared by us or on our behalf. If any person does make a statement that differs from what is in this prospectus supplement, the accompanying base prospectus or any free writing prospectuses, you should not rely on it. This prospectus supplement is not an offer to sell, nor is it a solicitation of an offer to buy, these securities in any jurisdiction in which the offer or sale is not permitted. You should assume that the information contained in this prospectus supplement, the accompanying base prospectus, any free writing prospectus and the documents incorporated by reference is accurate only as of their respective dates, regardless of the time of delivery of this prospectus supplement, the accompanying base prospectus, any free writing prospectus or of any sale of our securities in this offering. Our business, financial condition, results of operations and prospects may have subsequently changed.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying base prospectus are part of a registration statement on Form S-3 that the Company (then known as Transgenomic, Inc.), filed with the Securities and Exchange Commission, or SEC, in February 2015 using a “shelf” registration statement. Under the shelf registration statement, we may offer and sell any combination of securities described in the accompanying base prospectus in one or more offerings. We may offer shares of our common stock having an aggregate offering price of up to \$8,000,000 from time to time under this prospectus supplement at prices and on terms to be determined by market conditions at the time of offering. The accompanying base prospectus provides you with a general description of the securities we may offer. Each time we use the accompanying base prospectus to offer securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in the accompanying base prospectus. References in this prospectus supplement to the “Company,” “we,” “us,” or “our,” refer to Precipio, Inc. and its wholly-owned subsidiary unless otherwise indicated. This prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein include important information about us, our common stock and other information you should know before investing. This prospectus supplement describes the specific details regarding this offering, including the price, the amount of common stock being offered and the risks of investing in our securities. The accompanying base prospectus provides general information about us, some of which may not apply to this offering.

To the extent that any statement that we make in this prospectus supplement is inconsistent with statements made in the accompanying base prospectus, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying base prospectus. You should read both this prospectus supplement and the accompanying base prospectus together with additional information described under the heading, “Where You Can Find More Information.”

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the documents incorporated by reference herein include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements other than statements of historical facts contained in this prospectus supplement and in the documents incorporated by reference herein, including statements regarding the future financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. The words “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “should,” “plan,” “expect,” and similar expressions, as they relate to us, are intended to identify forward-looking statements. We have based these forward-looking statements largely on current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, without limitation, those described in “Risk Factors” in this prospectus supplement, in our Annual Report on Form 10-K for the year ended December 31, 2016, and our subsequent filings with the SEC incorporated by reference herein, including, among other things:

- the progress, timing and amount of expenses associated with our development and commercialization activities;
- our plans and ability to develop and commercialize new products and services, and make improvements to our existing products and services;
- our ability to protect our intellectual property and operate our business without infringing upon the intellectual property rights of others;
- our ability or the amount of time it will take to achieve successful reimbursement of our existing and future products and services from third-party payors, such as commercial insurance companies and health maintenance organizations, and government insurance programs, such as Medicare and Medicaid;
- the accuracy of our estimates of the size and characteristics of the markets that may be addressed by our products;
- the success of our study to demonstrate the impact of academic pathology expertise on diagnostic accuracy, and any other studies or trials we may conduct;
- our intention to seek, and our ability to establish, strategic collaborations or partnerships for the development or sale of our products and the effectiveness of such collaborations or partnerships;
- our expectations as to future financial performance, expense levels and liquidity sources;
- our anticipated cash needs and our estimates regarding our capital requirements and our needs for additional financing, as well as our ability to obtain such additional financing on reasonable terms;
-

our ability to compete with other companies that are or may be developing or selling products that are competitive with our products;

-

our ability to build a sales force to market our products and services, and anticipated increases in our sales and marketing costs due to an expansion in our sales force and marketing activities;

-

federal and state regulatory requirements, including potential United States Food and Drug Administration regulation of our products or future products;

-

anticipated trends and challenges in our potential markets;

-

our ability to attract and retain key personnel; and

-

other factors discussed elsewhere in this prospectus supplement.

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These risks are not exhaustive. Other sections of this prospectus supplement and the documents incorporated by reference herein include additional factors which could adversely impact our business and financial performance.

Moreover, we operate in a very competitive and rapidly changing environment.

New risk factors emerge from time to time and it is not possible for us to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. We cannot assure you that the events and circumstances reflected in the forward-looking statements will be achieved or occur. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

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SUMMARY

This summary highlights selected information appearing elsewhere or incorporated by reference in this prospectus supplement and accompanying prospectus and may not contain all of the information that is important to you. This prospectus supplement and the accompanying prospectus include or incorporate by reference information about the securities we are offering as well as information regarding our business and detailed financial data. You should read this prospectus supplement and the accompanying prospectus in their entirety, including the information incorporated by reference.

The Company

Overview

We are a cancer diagnostics company providing diagnostic products and services to the oncology market. We have built and continue to develop a platform designed to eradicate the problem of misdiagnosis by harnessing the intellect, expertise and technology developed within academic institutions and delivering quality diagnostic information to physicians and their patients worldwide. We operate a cancer diagnostic laboratory located in New Haven, Connecticut and have partnered with the Yale School of Medicine to capture the expertise, experience and technologies developed within academia so that we can provide a better standard of cancer diagnostics and solve the growing problem of cancer misdiagnosis. We also operate a research and development facility in Omaha, Nebraska which will focus on further development of ICE-COLD-PCR, or ICP, the patented technology described further below, which was exclusively licensed by us from Dana-Farber Cancer Institute, Inc., or Dana-Farber, at Harvard University. The research and development center will focus on the development of this technology, which we believe will enable us to commercialize other technologies developed by our current and future academic partners. Our platform connects patients, physicians and diagnostic experts residing within academic institutions. Launched in 2017, the platform facilitates the following relationships:

- Patients: patients may search for physicians in their area and consult directly with academic experts that are on the platform. Patients may also have access to new academic discoveries as they become commercially available.
- Physicians: physicians can connect with academic experts to seek consultations on behalf of their patients and may also provide consultations for patients in their area seeking medical expertise in that physician's relevant specialty. Physicians will also have access to new diagnostic solutions to help improve diagnostic accuracy.
- Academic Experts: academic experts on the platform can make themselves available for patients or physicians seeking access to their expertise. Additionally, these experts have a platform available to commercialize their research discoveries.

We intend to continue updating our platform to allow for patient-to-patient communications and allow individuals to share stories and provide support for one another, to allow physicians to consult with their peers to discuss and share challenges and solutions, and to allow academic experts to interact with others in academia on the platform to discuss their research and cross-collaborate.

ICP was developed at Harvard and is licensed exclusively by us from Dana-Farber. The technology enables the detection of genetic mutations in liquid biopsies, such as blood samples. The field of liquid biopsies is a rapidly growing market, aimed at solving the challenge of obtaining genetic information on disease progression and changes from sources other than a tumor biopsy.

Gene sequencing is performed on tissue biopsies taken surgically from the tumor site in order to identify potential therapies that will be more effective in treating the patient. There are several limitations to this process. First, surgical procedures have several limitations, including:

- Cost: surgical procedures are usually performed in a costly hospital environment. For example, according to a recent study the mean cost of lung biopsies is greater than \$14,000; surgery also involves hospitalization and recovery time.

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- Surgical access: various tumor sites are not always accessible (e.g. brain tumors), in which cases no biopsy is available for diagnosis.

- Risk: patient health may not permit undergoing an invasive surgery; therefore a biopsy cannot be obtained at all.

- Time: the process of scheduling and coordinating a surgical procedure often takes time, delaying the start of patient treatment.

Second, there are several tumor-related limitations that provide a challenge to obtaining such genetic information from a tumor:

- Tumors are heterogeneous by nature: a tissue sample from one area of the tumor may not properly represent the tumor's entire genetic composition; thus, the diagnostic results from a tumor may be incomplete and non-representative.

- Metastases: in order to accurately test a patient with metastatic disease, ideally an individual biopsy sample should be taken from each site (if those sites are even known). These biopsies are very difficult to obtain; therefore physicians often rely on biopsies taken from the primary tumor site.

The advent of technologies enabling liquid biopsies as an alternative to tumor biopsy and analysis is based on the fact that tumors (both primary and metastatic) shed cells and fragments of DNA into the blood stream. These blood samples are called "liquid biopsies" that contain circulating tumor DNA, or ctDNA, which hold the same genetic information found in the tumor(s). That tumor DNA is the target of genetic analysis. However, since the quantity of tumor DNA is very small in proportion to the "normal" (or "healthy") DNA within the blood stream, there is a need to identify and separate the tumor DNA from the normal DNA.

ICP is an enrichment technology that enables the laboratory to focus its analysis on the tumor DNA by enriching, and thereby "multiplying" the presence of, tumor DNA, while maintaining the normal DNA at its same level. Once the enrichment process has been completed, the laboratory genetic testing equipment is able to identify genetic abnormalities presented in the ctDNA, and an analysis can be conducted at a higher level of sensitivity, to enable the detection of such genetic abnormalities. The technology is encapsulated into a chemical that is provided in the form of a kit and sold to other laboratories who wish to conduct these tests in-house. The chemical within the kit is added to the specimen preparation process, enriching the sample for the tumor DNA so that the analysis will detect those genetic abnormalities.

Industry Problem

There is currently a significant problem with rates of misdiagnosis across numerous disease states (particularly in cancer) due to an inefficient industry. We believe that the diagnostic industry has been commoditized, focusing primarily on price and test turnaround times as competing factors, at the expense of quality and accuracy. Increasingly complex disease states are met with eroding specialization rather than increased expertise. According to a study conducted by the National Coalition of Health, this results in an industry with up to 28% cancer misdiagnosis rates which is failing to meet the needs of physicians, patients and the healthcare system as a whole. New technologies offer improved accuracy; however, many are either inaccessible, or are not economically practical for clinical use. Despite much publicity of the industry transitioning from fee-per-service to value-based payments, that transition has not yet occurred in diagnostics. When a patient is misdiagnosed, physicians end up administering incorrect treatments, often creating adverse effects rather than improving outcomes, payers waste valuable treatment dollars applied incorrectly and can incur substantial downstream costs and, most importantly, patients pay the ultimate price with increased morbidity and mortality. According to a report by Pinnacle Health, the estimated cost of misdiagnosis to the

healthcare system is \$750 billion annually. We believe that the academic path of specialization produces the critical expertise necessary to correctly diagnose disease; and that academic institutions have an unlocked potential to address this problem. Our solution is to create an exclusive platform that harnesses academic expertise and proprietary technologies to deliver the highest standard of diagnostic accuracy and patient care. Physicians, hospitals, payers and, most importantly, patients all benefit from more accurate diagnostics.

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Market

As a services and technology commercialization company, we currently participate in two segments within the U.S. domestic oncology diagnostics market. The first is the anatomic pathology services market, which is estimated to reach \$22 billion by the end of 2022, growing at an average 8% compound annual growth rate from 2017 to 2021. The second segment is the liquid biopsy reagents/kits market. According to the Piper Jaffray report from September 2015 on the liquid biopsy market, the domestic market opportunity for the oncology liquid biopsy market is over \$28 billion per year, and encompasses screening, therapy selection, treatment monitoring and recurrence. The current market size for new cancer diagnoses is 1.6 million new cases per year and over 15.5 million people living with cancer, and the cancer diagnostics market size in North America was estimated to be \$50 billion in 2016. We believe additional opportunities exist in clinical trials searching for low cost and high quality solutions for patient selection and treatment monitoring.

Our Solution

Our Platform

Our platform is designed to provide physicians and their patients access to the necessary academic expertise and technology to properly diagnose disease. To our knowledge we are the only company focused on addressing the issue of diagnostic accuracy with an innovative, robust and scalable business model by:

- Providing physicians and their patients access to world-class academic experts and technologies.
- Allowing payers to benefit from quality-based outcomes to their patients and recognize cost savings.
- Enabling cross-collaboration between physicians and academic institutions to advance research and discovery.

Our exclusive agreement with the Department of Pathology at Yale University, or the Pathology Services Agreement, is part of a unique platform that to our knowledge is not offered by other commercial laboratories. Our customers are oncologists who biopsy their patients in order to confirm or rule out the presence of cancer. After our customers send the samples to us, we conduct all the technical tests at our New Haven facility. We then transmit the test results to the pathologists at Yale who have access to our laboratory information system from their respective offices, enabling them to review and render their diagnostic interpretation of the test results, for reporting. In partnership with Yale faculty, we have developed a proprietary algorithm that is applied to each sample submitted to us for testing, resulting in our ability to render a more concise and accurate diagnosis. The final diagnostic results are prepared by Yale pathologists and integrated into the final report by us, and are then delivered electronically through our web portal to the referring clinician. The patient's insurance is billed for the services; we are paid for the technical work done at our laboratory; and Yale pathologists are paid by us for their diagnostic interpretation.

In March 2017 we renewed the Pathology Services Agreement for an additional five-year term, effective as of June 2016, through June 2021. Under the Pathology Services Agreement, the Yale Department of Pathology may not provide the hematopathology services that it provides to us to any other commercial entity that is one of our competitors. The Pathology Services Agreement allows for termination by either party (i) for uncured breach by the other party, (ii) if either party has its respective license suspended or revoked, (iii) if the insurance coverage of either party is canceled or modified, (iv) if we fail to maintain or meet the requirements of Medicare conditions of participation, or (v) if we declare bankruptcy. The Pathology Services Agreement also provides that if the performance by either party (i) jeopardizes the licensure or accreditation of Yale or any Yale physician, (ii) jeopardizes either party's participation in Medicare, Medicaid or other federal, state or commercial reimbursement programs, (iii) violates any statute, ordinance or otherwise is deemed illegal, (iv) is deemed unethical by any recognized body, agency or association in the medical or laboratory fields, or (v) causes a substantial threat to Yale's tax-exempt status, then either party may initiate negotiations to amend the Pathology Services Agreement and the Pathology Services Agreement will terminate if a mutually agreed amendment is not executed by the parties within 30 days.

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ICE-COLD-PCR

ICP technology was developed at Dana-Farber and is licensed by us. ICP is a unique, proprietary patented specimen enrichment technology that increases the sensitivity of molecular based tests from approximately 90-95% to 99-99.99%. Traditional molecular testing is done on tumor biopsies. These tests are typically conducted at disease onset, when the patient undergoes a biopsy. In the typical course of treatment, a patient is rarely re-biopsied, and therefore the only genetic information is based on the initial biopsy. Tumors are known to shed cells into the patient's blood stream, where they circulate alongside normal cells; however, existing testing methodologies are not sufficiently sensitive to differentiate between the tumor and normal cells. The increased sensitivity provided by ICP allows for testing of genetic mutations that occur within tumors to be conducted on peripheral blood samples, termed liquid biopsies. This technical capability enables physicians to test for genetic mutations without conducting a biopsy, through a simple blood test rather than a biopsy extracted from the actual tumor. The results of such tests can be used for diagnosis, prognosis and therapeutic decisions. The technology is encapsulated within a chemical (reagent) used during the specimen preparation process, which enriches (amplifies) the tumor DNA detected within the blood sample, while suppressing the normal DNA. In addition to offering this technology as a clinical service, we are developing panels that will be sold as reagent kits to other laboratories to set up this testing in their facilities. This enables other labs to improve their test sensitivity and render results on liquid biopsies. The business model of selling reagents to other laboratories both expands the reach and impact of the technology, while eliminating the reimbursement risks that we would face in running the tests in-house.

We license the ICP technology from Dana-Farber through a license agreement, or the License Agreement. The License Agreement grants us an exclusive license to the ICP technology, subject to a non-exclusive license granted to the U.S. government, in the areas of mutation detection using Sanger (di-deoxy) sequencing and mitochondrial DNA analysis for all research, diagnostic, prognostic and therapeutic uses in humans, animals, viruses, bacteria, fungi, plants or fossilized material. The License Agreement also grants us a non-exclusive license in the areas of mutation detection using DHPLC, surveyor-endonuclease-based mutation detection and second generation sequencing techniques. We paid Dana-Farber an initial license fee and are required to make milestone payments with respect to the first five licensed products or services we develop using the licensed technology as well as royalties ranging from high single to low double digits on net sales of licensed products and services for sales made by us and sales made to any distributors. The License Agreement remains in effect until we cease to sell licensed products or services under the agreement. Dana-Farber has the right to immediately terminate the License Agreement if (i) we cease to carry on our business with respect to licensed products and services, (ii) we fail to make any payments under the License Agreement (subject to a cure period), (iii) we fail to comply with due diligence obligations under the License Agreement (subject to a cure period), (iv) we default in our obligations to procure and maintain insurance as required by the License Agreement, (v) any of our officers is convicted of a felony relating to the manufacture, use, sale or importation of licensed products under the License Agreement, (vi) we materially breach any provision of the License Agreement (subject to a cure period), or (vii) we or Dana-Farber become insolvent. We may terminate the License Agreement for convenience upon 180 days' prior written notice.

Reimbursement

Since cancer is typically a disease with an onset at a later age, the largest insurance provider which constitutes close to 32% of our patient cases is Medicare. The remaining patients are insured by private insurance companies who provide patient coverage and pay for patients health-related costs. The Center for Medicare and Medicaid Services, or CMS, typically publishes its rates annually, and providers such as us bill according to the codes relevant to the tests we conduct. Other private insurance companies will often follow suit and adjust their rates according to the published CMS rates.

Our Products

Our initial product offering consists of clinical diagnostic services harnessing the expertise of the Yale School of Medicine and the commercialization and application of ICP, a cutting-edge technology developed at Dana-Farber, part of Harvard University. Our clinical diagnostic services focus on the

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diagnosis of blood cancers and the delivery of an accurate diagnosis to oncologists, with demonstrated superior results through an exclusive partnership with Yale. We intend to enter into additional partnerships during 2018. Our cutting-edge liquid biopsy technology, ICP, enables detection of abnormalities in blood samples (cfDNA) down to as low as .01%. This low-cost technology enables customers to conduct the tests in-house using existing mutation detection platforms and creates what we believe to be the only current economically viable option for liquid biopsy applications. Our customers are oncologists, hospitals, reference laboratories, and pharma and biotech companies, to whom we plan to cross-market other technologies (such as ICP) and services on our platform.

We built and obtained CLIA certification to operate our New Haven laboratory. The laboratory is approximately 3,000 square feet and has several sub-departments such as flow cytometry, immune-histochemistry, cytogenetics, and molecular testing. The laboratory is currently operated by five lab technicians and is supervised by a laboratory manager and a medical director. Our laboratory is inspected every two years by a Connecticut state-appointed inspection, and once approved by the state inspector, we are issued a CLIA-certificate. Furthermore, the laboratory supervisor and medical director must conduct a self-inspection every two years (rotating with the state inspection) and must submit those results to the state department of health.

The laboratory operations are governed by Standard Operating Procedure manuals, or SOPs, which detail each aspect of the laboratory environment including the work flow, quality control, maintenance, and safety. These SOPs are reviewed annually, approved and signed off by the laboratory manager and medical director.

Our Strategy

Our objective is to eradicate the problem of misdiagnosis by harnessing the intellect, expertise and technology developed within academic institutions and delivering quality diagnostic information to physicians and their patients worldwide. To achieve this objective our strategy is to focus our efforts on the following areas:

- Clinical pathology services — we intend to continue building our platform by increasing the number of academic experts available on our platform and partnering with other academic institutions, allowing us to expand our portfolio of services to cover additional types of cancer.
- Ice-Cold PCR — we believe we can commercialize and develop new applications for our ICP technology, including:
 - Developing specific application panels for patient monitoring for treatment resistance and disease recurrence;
 - Building focused diagnostic and screening panels for initial disease identification;
 - Leveraging our platform customers to generate demand for repeat, localized, in-house liquid biopsy testing; and
 - Applying ICP technology to other markets, such as pre-natal and companion diagnostics.
- New product pipeline through outsourced research and development — we plan on utilizing our partnerships with academic institutions to gain access to newly-developed technologies. We also believe there is an opportunity to partner with biotechnology companies to introduce their products to the U.S. market through our platform.
- Academic partnerships — we intend to leverage the intellectual expertise and technologies developed within academic institutions. We believe we have validated this model through our partnership with the Yale School of Medicine and are currently in the process of adding new academic partners.

Competition

Our principal competition in clinical pathology services comes largely from two groups. The first group consists of companies that specialize in oncology and offer directly competing services to our diagnostic services. These companies often provide a high level of service focused on oncology and offer their services

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to oncologists and pathology departments within hospitals. Our competitors in this group include Genoptix, GenPath Diagnostics and Miraca Life Sciences. The second group consists of large commercial companies that offer a wide variety of laboratory tests ranging from simple chemistry tests to complex genetic testing. Our competitors in this group include LabCorp and Quest Diagnostics. We believe that companies in this industry primarily compete on price and speed results delivery. We have chosen to focus on the quality and accuracy of results. Within the liquid biopsy market, our competitors include Guardant Health and Trovagene, Inc.

Competitive Advantage

We capitalize on the intellectual expertise and technologies developed within academic institutions by academic experts. While several industry papers report a misdiagnosis rate as high as 28% of cases diagnosed, we believe that leveraging academic expertise in diagnosis can significantly reduce the number of patients being misdiagnosed. In an initial data set of over 100 clinical cases received and processed by us with a diagnosis rendered by Yale pathologists, we believe less than 1% have resulted in misdiagnosis. The diagnostic report provided by us was then requested by a patient or the patient's physician for a second opinion to be conducted by another laboratory. In those cases, less than 1% reported back a disagreement with the original primary diagnosis. While a minority of patients are treated in academic centers and can benefit from that specialized expertise, the majority of patients are diagnosed by commercial reference laboratories. Comparatively, these commercial laboratories and diagnostic companies have broad access to and serve a majority of patients; however, we believe their lack of specialized expertise results in significantly higher misdiagnosis rates. Academic institutions also invest heavily in the development of new technologies, many of which are often used only within the academic institution and do not benefit outside patients. Our platform offers patients anywhere access to these innovative technologies developed within Yale and any other academic institutions we engage in the future.

In July 2017, after receiving approval from the Yale Human Investigation Committee, we commenced a study to demonstrate the impact of academic pathology expertise on diagnostic accuracy. The purpose of this study is to use data from a large set of patients to determine whether academic pathologists provide a higher level of accuracy of the diagnosis, improving patient care, as well as reducing the subsequent costs involved in treating the patient, compared to diagnosis conducted outside of an academic institution. The study is being conducted at the Department of Pathology at Yale School of Medicine.

The retrospective study will gather data on approximately 500 to 1,000 patients who have received an initial diagnosis, followed by a second opinion, and stratify them into two cohorts. The first cohort will consist of patients diagnosed initially outside of an academic institution, and then referred to Yale for treatment where they received a second opinion diagnosis by an academic pathologist at Yale. The second cohort will consist of patients initially diagnosed at Yale, who then proceeded to obtain a second opinion from an outside institution. The study will identify those patients where the second opinion differs from the initial diagnosis, suggesting a possible misdiagnosis. In those situations, the case will be referred to another academic institution to conduct a blinded, third evaluation in order to determine which diagnosis was correct. The study will then further evaluate the subsequent patient response due to the change in diagnosis, to determine the impact that the change in diagnosis had on the patient.

As part of the study, we have also partnered with the Department of Medicine at Thomas Jefferson University in Philadelphia, which routinely conducts research to evaluate the economic impact of various healthcare decisions, to quantify the cost of misdiagnosis within cancer treatment. In those situations where discordance is identified between the primary and secondary diagnosis, an evaluation will be made of pre-and-post diagnosis change in the course of treatment, to correlate both the healthcare dollars spent, and the clinical outcome.

Recent Events

At a special meeting of our stockholders held on January 30, 2018, the Company's Stockholders voted in favour of approving (i) for purposes of complying with applicable NASDAQ Listing Rules, (a) the potential issuance of more than 20% of our common stock pursuant to the November 2017 Offering and (b) the terms of the Series C Convertible Preferred Stock and warrants to purchase common stock sold in

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the November 2017 Offering, and (ii) an amendment and restatement of the Company's 2017 Stock Option and Incentive Plan, or the 2017 Plan, to (a) increase the aggregate number of shares authorized for issuance under the 2017 Plan by 5,389,500 shares to 6,056,166 shares, (b) increase the maximum number of shares that may be granted in the form of stock options or stock appreciation rights to any one individual in any one calendar year and the maximum number of shares underlying any award intended to qualify as "performance-based compensation" to any one individual in any performance cycle, in each case to 1,000,000 shares of common stock, (c) increase the aggregate number of shares authorized for issuance under the 2017 Plan as incentive stock options to 6,056,166 shares, cumulatively increased on January 1, 2019 and on each January 1 thereafter by the lesser of the annual increase for such year or 500,000 shares, and (d) add an "evergreen" provision, pursuant to which the aggregate number of shares authorized for issuance under the 2017 Plan will be automatically increased each year beginning on January 1, 2019 by 5% of the number of shares of common stock issued and outstanding on the immediately preceding December 31, or such lesser number of shares determined by our Board of Directors or Compensation Committee.

We expect revenue for the quarter ended December 31, 2017 will be approximately \$0.9 million, compared to \$0.3 million in the quarter ended September 30, 2017, and compared to \$0.3 million for the quarter ended December 31, 2016. This estimated revenue represents a three-fold increase from the previous quarter, as well as an increase of 200% from the year-over-year fourth quarter of 2016.

The financial data for the quarter ended December 31, 2017 set forth above is preliminary and is based on information available to management as of the date of this prospectus and is subject to completion by management of our financial statements for the quarter ended December 31, 2017. Our independent registered public accountants have not audited, reviewed or performed any procedures with respect to such preliminary financial data and accordingly do not express an opinion or any other form of assurance with respect thereto.

Merger Transaction

On June 29, 2017, the Company (then known as Transgenomic, Inc., or Transgenomic), completed its merger, or the Merger, with Precipio Diagnostics, LLC, a privately held Delaware limited liability company, or Precipio, in accordance with the terms of the Agreement and Plan of Merger, or the Merger Agreement, dated October 12, 2016, as amended on February 2, 2017 and June 29, 2017, by and among Transgenomic, Precipio and New Haven Labs Inc., or Merger Sub, a wholly-owned subsidiary of Transgenomic. Pursuant to the Merger Agreement, Merger Sub merged with and into Precipio, with Precipio surviving the Merger as a wholly-owned subsidiary of the combined company. In connection with the Merger, the Company changed its name from Transgenomic, Inc. to Precipio, Inc. and effected a 1-for-30 reverse stock split of its common stock.

Company Information

We were incorporated under the laws of the State of Delaware in March 1997. Our principal executive office is located at 4 Science Park, New Haven, Connecticut, 06511, and our telephone number is (203) 787-7888. Our website address is www.precipio.com. We do not incorporate the information on or accessible through our website into this prospectus, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus. Our current and future annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and other filings with the SEC are available, free of charge, through our website as soon as reasonably practicable after we electronically file such materials with, or furnish them to, the SEC. Our SEC filings can be accessed through the investors section of our website. The information contained on, or accessible through, our website is not intended to be part of this prospectus or any report we file with, or furnish to, the SEC and incorporated by reference herein. Our common stock trades on the NASDAQ Capital Market, or NASDAQ, under the symbol "PRPO."

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THE OFFERING

Common stock offered by us

Shares of common stock, \$0.01 par value per share, with an aggregate offering price of up to \$8,000,000

Manner of offering

“At-the-market” offering that may be made from time to time. See “Plan of Distribution” on page S-29

Use of proceeds

We expect the net proceeds from this offering will be approximately \$7.6 million, after deducting the offering expenses payable by us. We intend to use the net proceeds from this offering for the growth of our sales force and business development team, progression of our product development and for working capital and other general corporate purposes. See “Use of Proceeds” on page S-14 of this prospectus supplement.

NASDAQ Capital Market symbol

“PRPO”

Risk factors

This investment involves a high degree of risk. See “Risk Factors” beginning on page S-9 of this prospectus supplement.

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RISK FACTORS

Any investment in our securities involves a high degree of risk. In addition to the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus, you should carefully consider the important factors set forth under the heading “Risk Factors” in our Quarterly Reports on Form 10-Q for the quarters ended June 30, 2017 and September 30, 2017, filed with the SEC on August 22, 2017 and November 20, 2017, respectively, and incorporated herein by reference, as well as any updates thereto contained in subsequent filings with the SEC or any applicable prospectus supplement or free writing prospectus, before investing in our securities. For further details, see the sections titled “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference” in this prospectus supplement.

Any of the risk factors set forth below or referred to above could significantly and negatively affect our business, results of operations or financial condition, which may lower the trading price of our common stock.

Risks Related to our Business and Strategy

We have incurred losses since our inception and expect to incur losses for the foreseeable future. We cannot be certain that we will achieve or sustain profitability.

We have incurred losses since our inception and expect to incur losses in the future. As of September 30, 2017 and December 31, 2016, we have an accumulated total deficit of approximately \$21.5 million and \$10.8 million, respectively. For the nine months ended September 30, 2017 and the fiscal year ended December 31, 2016, we had a net loss and comprehensive loss attributable to common stockholders of approximately \$19.8 million and \$4.1 million, respectively. To date, we have experienced negative cash flow from development of our diagnostic technology, as well as from the costs associated with establishing a laboratory and building a sales force to market our products and services. We expect to incur substantial net losses for the foreseeable future to further develop and commercialize our diagnostic technology. We also expect that our selling, general and administrative expenses will continue to increase due to the additional costs associated with market development activities and expanding our staff to sell and support our products. Our ability to achieve or, if achieved, sustain profitability is based on numerous factors, many of which are beyond our control, including the market acceptance of our products, competitive product development and our market penetration and margins. We may never be able to generate sufficient revenue to achieve or, if achieved, sustain profitability.

Because of the numerous risks and uncertainties associated with further development and commercialization of our diagnostic technology and any future tests, we are unable to predict the extent of any future losses or when we will become profitable, if ever. We may never become profitable and you may never receive a return on an investment in our securities. An investor in our securities must carefully consider the substantial challenges, risks and uncertainties inherent in the development and commercialization of tests in the medical diagnostic industry. We may never successfully commercialize our diagnostic technology or any future tests, and our business may fail.

We will need to raise substantial additional capital to commercialize our diagnostic technology, and our failure to obtain funding when needed may force us to delay, reduce or eliminate our product development programs or collaboration efforts.

As of September 30, 2017, our cash balance was \$0.4 million and our working capital was approximately negative \$12.6 million. Due to our recurring losses from operations and the expectation that we will continue to incur losses in the future, we will be required to raise additional capital to complete the development and commercialization of our current product candidates and to pay off our obligations. To date, to fund our operations and develop and commercialize our products, we have relied primarily on equity and debt financings. When we seek additional capital, we may seek to sell additional equity and/or debt securities or to obtain a credit facility, which we may not be able to do on favorable terms, or at all. Our ability to obtain additional financing will be subject to a number of factors, including market conditions, our operating performance and investor sentiment. If we are unable to raise additional capital when required or on acceptable terms, we may have to significantly delay, scale back or discontinue the

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development and/or commercialization of one or more of our product candidates, restrict or cease our operations or obtain funds by entering into agreements on unattractive terms.

Recurring operating losses raise substantial doubt about our ability to continue as a going concern.

We have incurred losses since our inception and expect to incur losses in the future. As of September 30, 2017 and December 31, 2016, we have an accumulated total deficit of approximately \$21.5 million and \$10.8 million, respectively.

The audit report issued by our independent registered public accounting firm included in the Precipio, Inc. Form 10-K for financial statements for the fiscal year ended December 31, 2016 states that our independent registered public accounting firm has substantial doubt in our ability to continue as a going concern due to the risk that we may not have sufficient cash and liquid assets at December 31, 2016 to cover our operating and capital requirements for the next 12 month period from issuance of the Form 10-K. In addition, the audit report issued by our independent registered public accounting firm for Precipio Diagnostics, LLC for financial statements for the fiscal year ended December 31, 2016, as filed with the Securities and Exchange Commission on Form 8-K/A on July 31, 2017, states that our independent registered public accounting firm has substantial doubt in Precipio Diagnostic LLC's ability to continue as a going concern.

Our ability to continue as a going concern is dependent upon a combination of achieving our business plan, including generating additional revenue, and raising additional financing to meet our debt obligations and paying liabilities arising from normal business operations when they come due. There remains substantial doubt about our ability to continue as a going concern. There can be no assurance that we will be able to successfully achieve our initiatives summarized above in order to continue as a going concern.

Risks Related to Ownership of our Securities

We expect that our stock price may fluctuate significantly.

There has been, and continues to be, a limited public market for our common stock, and an active trading market for our common stock has not and may never develop or, if developed, be sustained. The trading price of our common stock may 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 fluctuations in our financial condition and operating results;
- actual or anticipated changes in our growth rate relative to our competitors;
- competition from existing products or new products that may emerge;
- announcements by us, our academic institution partners, or our competitors of significant acquisitions, strategic partnerships, joint ventures, collaborations, or capital commitments;
- failure to meet or exceed financial estimates and projections of the investment community or that we provide to the public and the revision of any financial estimates and projections that we provide to the public;
- issuance of new or updated research or reports by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
-

share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;

- additions, transitions or departures of key management or scientific personnel;
- disputes or other developments related to proprietary rights, including patents, litigation matters, and our ability to obtain patent protection for our technologies;
- changes to reimbursement levels by commercial third-party payors and government payors, including Medicare, and any announcements relating to reimbursement levels;

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- announcement or expectation of additional debt or equity financing efforts;
- sales of our common stock by us, our insiders, or our other stockholders; and
- general economic and market conditions.

These and other market and industry factors may cause the market price and demand for our common stock to fluctuate substantially, regardless of our actual operating performance, which may limit or prevent investors from readily selling their shares of our common stock and may otherwise negatively affect the liquidity of our common stock. In addition, the stock market in general, and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. In the past, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. Such a lawsuit could also divert the time and attention of our management.

We have identified material weaknesses in our internal control over financial reporting that could, if not remediated, result in material misstatements in our financial statements.

We have identified material weaknesses in our internal control over financial reporting that could, if not remediated, result in material misstatements in our financial statements.

Based on our evaluation of internal control over financial reporting, we have identified the following deficiencies that we believe to be material weaknesses: (i) our lack of expertise necessary to validate the proper accounting and valuation for the complex technical accounting treatment of complex debt and equity instruments and (ii) our controls as related to revenue recognition resulting from the fact we do not have contracts with certain payors and do not have proper controls over the estimates for doubtful accounts and contractual allowances.

We have initiated remedial measures, but if our remedial measures are insufficient to address the material weaknesses, or if the material weaknesses are not remediated within the time period we currently anticipate, or if additional material weaknesses or significant deficiencies in our internal control over financial reporting are discovered or occur in the future, our consolidated financial statements may contain material misstatements, and we could be required to restate our financial results. In addition, if we are unable to successfully remediate these material weaknesses and if we are unable to produce accurate and timely financial statements, our stock price may be materially adversely affected and we may be unable to maintain compliance with applicable stock exchange listing requirements. Effective internal controls are necessary for us to produce reliable financial reports and are important to helping prevent financial fraud. If we cannot provide reliable financial reports or prevent fraud, our business and operating results could be harmed, investors could lose confidence in our reported financial information, and the trading price of our common stock could drop significantly.

If we discover material weaknesses and other deficiencies in our internal control and accounting procedures, our stock price could decline significantly and raising capital could be more difficult.

If we fail to comply with the rules under the Sarbanes-Oxley Act of 2002 related to disclosure controls and procedures, or, if we discover additional material weaknesses and other deficiencies in our internal control and accounting procedures, our stock price could decline significantly and raising capital could be more difficult.

Moreover, effective internal controls are necessary for us to produce reliable financial reports and are important to helping prevent financial fraud. If we cannot provide reliable financial reports or prevent fraud, our business and operating results could be harmed, investors could lose confidence in our reported financial information, and the trading price of our common stock could drop significantly. In addition, we cannot be certain that additional material weaknesses or significant deficiencies in our internal controls will not be discovered in the future.

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We have not paid dividends on our common stock in the past and do not expect to pay dividends on our common stock for the foreseeable future. Any return on investment may be limited to the value of our common stock.

No cash dividends have been paid on our common stock. We expect that any income received from operations will be devoted to our future operations and growth. We do not expect to pay cash dividends on our common stock in the near future. Payment of dividends would depend upon our profitability at the time, cash available for those dividends, and other factors as our board of directors may consider relevant. If we do not pay dividends, our common stock may be less valuable because a return on an investor's investment will only occur if our stock price appreciates. Investors in our common stock should not rely on an investment in our company if they require dividend income.

If securities or industry analysts do not publish research or reports about our business, or if they change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for our common stock relies in part on the research and reports that equity research analysts publish about us and our business. We do not control these analysts. The price of our common stock could decline if one or more equity research analysts downgrade our common stock or if they issue other unfavorable commentary or cease publishing reports about us or our business.

Future sales or other issuances of our common stock could depress the market for our common stock.

Sales of a substantial number of shares of our common stock, or the perception by the market that those sales could occur, could cause the market price of our common stock to decline or could make it more difficult for us to raise funds through the sale of equity in the future.

In connection with our public offering in August 2017 and our registered direct offering in November 2017, our directors and officers and certain of our stockholders have entered into lock-up agreements for a period of 90 days following the applicable offering. All or a portion of these shares may be released from the lock-up prior to the expiration of the lock-up period at the sole discretion of Aegis, as representative of the underwriter of the August 2017 offering and as the placement agent for the November 2017 offering. Upon expiration or earlier release of this lock-up, our directors and officers and stockholders may sell shares into the market, which could adversely affect the market price of shares of our common stock. In addition, in connection with our merger with Precipio, our directors and officers and certain of our stockholders have entered into lock-up agreements for a period of 180 days following the effective date of the merger. Since expiration of this lock-up in December 2017, our directors and officers and stockholders have been able to sell shares into the market, which could adversely affect the market price of shares of our common stock. Due to the timing of the filing of our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, we will not be eligible to file a new Form S-3 registration statement until September 1, 2018. Our existing Form S-3 registration statement will expire on February 13, 2018. This may have an adverse impact on our ability to raise additional capital or to comply with our obligation to register outstanding shares of our capital stock.

Future issuances of common stock could further depress the market for our common stock.

Investors in this offering will experience immediate and substantial dilution and may experience further dilution in the future.

Investors in this offering will experience immediate dilution in their net tangible book value per share to the extent of the difference between the price per share of common stock and the "adjusted" net tangible book value per share after giving effect to the offering. The price for one share of common stock is substantially higher than the net tangible book value per share of our common stock. Our net tangible book value as of September 30, 2017 was a deficit of \$(13.2) million, or \$(1.40) per share of common stock. As a result, investors purchasing shares of our common stock in this offering will incur immediate dilution of \$1.21 per share of common stock, based on an average offering price per share of \$1.04. See the section titled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase shares in this offering. Furthermore, we expect that we will seek to raise additional capital from time to time in the future. Such financings may involve the issuance of equity and/or securities convertible into or exercisable or exchangeable for our equity securities. We also expect to continue to utilize equity-based compensation.

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To the extent the warrants and options are exercised or we issue common stock, preferred stock, or securities such as warrants that are convertible into, exercisable or exchangeable for, our common stock or preferred stock in the future, you may experience further dilution.

We will have broad discretion over the use of the net proceeds from this offering.

We will have broad discretion to use the net proceeds from the sale of common stock in this offering, and investors in our stock will be relying on the judgment of our board of directors and management regarding the application of these proceeds. We expect to use a substantial portion of the net proceeds from this offering for the growth of our sales force and business development team, progression of our product development, and working capital and general corporate purposes. Our inability to apply the net proceeds from this offering effectively could have an adverse effect on our financial condition or results of operations.

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USE OF PROCEEDS

We expect the net proceeds from this offering will be approximately \$7.6 million, after deducting the offering expenses payable by us. We intend to use the net proceeds from this offering for the growth of our sales force and business development team, progression of our product development and for working capital and other general corporate purposes.

The amounts actually expended for each purpose may vary significantly depending upon numerous factors, including the amount and timing of the proceeds from this offering and the progress of our product development activities. In addition, expenditures may also depend on the establishment of new collaborative arrangements with other partners, the availability of other financing and other factors.

We anticipate that we will be required to raise substantial additional capital to continue to fund product development and the growth of our sales force and business development team. We expect to seek to raise additional capital through additional public or private financings, principally through equity issuances.

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CAPITALIZATION

The following table sets forth our unaudited actual cash and cash equivalents and our capitalization as of September 30, 2017:

- on an actual basis;
- on a pro forma basis to give effect to:

our issuance and sale in November 2017 of 2,748 shares of our Series C Preferred Stock, par value \$0.01 per share, or Series C Preferred Stock, which is convertible into 714,285 shares of our common stock at a conversion price of \$1.40 per share, and warrants to purchase up to 1,962,857 shares of our common stock for gross proceeds of \$2.7 million; and

the issuance of 809,742 shares of our common stock, subsequent to September 30, 2017, as a result of the conversion of 1,254 shares of our Series B Preferred Stock and 284 shares of our Series C Preferred Stock; and

- on a pro forma as adjusted basis to give further effect to the issuance of the securities offered hereby.

You should read this information in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes appearing in our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2017, which is incorporated by reference into this prospectus supplement.

| | As of September 30, 2017 | | |
|---|--------------------------|--------------|-----------------------|
| | Actual | Pro Forma | Pro Forma As Adjusted |
| Cash and cash equivalents | \$ 381,000 | \$ 2,759,000 | \$ 10,370,000 |
| Current maturities of long-term debt | \$ 42,000 | \$ 42,000 | \$ 42,000 |
| Common stock warrant liability | \$ 618,000 | \$ 618,000 | \$ 618,000 |
| Stockholders’ equity: | | | |
| Preferred stock, \$0.01 par value; 15,000,000 shares authorized, actual, pro forma and pro forma as adjusted; 3,641 shares of Series B Preferred Stock issued as of September 30, 2017, actual; and 2,387 shares of Series B Preferred Stock issued and outstanding pro forma and pro forma as adjusted; no shares of Series C Preferred Stock issued as of September 30, 2017, actual; and 2,464 shares of Series C Preferred Stock issued and outstanding pro forma and pro forma as adjusted | \$ 36 | \$ 48 | \$ 48 |
| Common stock, \$0.01 par value; 150,000,000 shares authorized, actual, pro forma and pro forma as adjusted; 9,446,878 shares issued and outstanding at September 30, 2017, actual, 10,256,620 shares issued and outstanding pro forma, and 18,352,773 shares issued | \$ 94,000 | \$ 103,000 | \$ 183,000 |

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and outstanding pro forma as adjusted

| | | | |
|----------------------------|-----------------|-----------------|-----------------|
| Additional paid-in capital | \$ 41,879,000 | \$ 44,248,000 | \$ 51,778,000 |
| Accumulated deficit | \$ (21,567,000) | \$ (21,567,000) | \$ (21,567,000) |
| Total stockholders' equity | \$ 20,406,036 | \$ 22,784,048 | \$ 30,394,048 |

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In the discussion and table above, we assume no exercise of outstanding options or warrants. The above discussion and table are based on pro forma amount of 10,256,620 shares outstanding as of September 30, 2017 and excludes:

- 236,888 shares of our common stock subject to outstanding options and stock appreciation rights as of September 30, 2017, with a weighted average exercise price of \$7.30 per share;
- 6,197,681 shares of our common stock subject to outstanding warrants as of September 30, 2017, with a weighted average exercise price of \$4.75 per share;
- 1,705,000 shares of our common stock issuable upon conversion of 2,387 shares of our Series B Preferred Stock;
- 1,760,000 shares of our common stock issuable upon conversion of 2,464 shares of our Series C Preferred Stock;
- 441,334 shares of our common stock available for awards under our 2006 Equity Incentive Plan and 2017 Stock Option and Incentive Plan; and
- 1,708 shares of our common stock issuable upon conversion of our outstanding convertible notes.

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If you invest in the securities, your interest in the common stock offered hereunder may be diluted to the extent of the difference between the average price offered for each share of common stock and the net tangible book value per share of our common stock immediately after this offering. As of September 30, 2017, our historical net tangible book value was \$(13.2) million, or \$(1.40) per share of common stock, based on 9,446,878 shares of our common stock outstanding at September 30, 2017. Our historical net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities, divided by the total number of shares of our common stock outstanding as of September 30, 2017.

Our pro forma net tangible book value as of September 30, 2017 was \$(10.8) million, or \$(1.05) per share of our common stock. Pro forma net tangible book value represents the amount of our total tangible assets reduced by the amount of our total liabilities, after giving effect to (i) our issuance and sale in November 2017 of 2,748 shares of Series C Preferred Stock, which is convertible into 714,285 shares of our common stock at a conversion price of \$1.40 per share, and warrants to purchase up to 1,962,857 shares of our common stock for gross proceeds of \$2.7 million; and (ii) the issuance of 809,742 shares of our common stock, subsequent to September 30, 2017, as a result of the conversion of 1,254 shares of our Series B Preferred Stock and 284 shares of our Series C Preferred Stock. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares of our common stock outstanding as of September 30, 2017, after giving effect to the pro forma adjustments described above.

After giving further effect to the issuance of 8,096,153 shares of common stock in this offering at a price of \$1.04 per share of common stock, our net tangible book value as of September 30, 2017 would have been \$(3.2) million, or \$(0.17) per share of our common stock. This amount represents an immediate increase of net tangible book value to our existing stockholders of \$0.88 per share and an immediate dilution of \$1.21 per share to the new investors in this offering.

The following table illustrates this per share dilution:

| | |
|--|-----------|
| Public offering price for one share of common stock | \$ 1.04 |
| Historical net tangible book value per share as of September 30, 2017 | \$ (1.40) |
| Increase per share attributable to the pro forma adjustments described above | \$ 0.35 |
| Pro forma net tangible book value per share as of September 30, 2017. | \$ (1.05) |
| Increase per share attributable to sale of shares by us in this offering | \$ 0.88 |
| Net tangible book value per share, as adjusted to give effect to the pro forma adjustments described above and this offering | \$ (0.17) |
| Dilution per share to investors in this offering | \$ 1.21 |

The number of shares of common stock outstanding after this offering is based on pro forma amount of 10,256,620 shares of common stock outstanding as of September 30, 2017, and excludes as of such date:

- 236,888 shares of our common stock subject to outstanding options and stock appreciation rights, with a weighted average exercise price of \$7.30 per share;
- 6,197,681 shares of our common stock subject to outstanding warrants, with a weighted average exercise price of \$4.75 per share;
- 1,705,000 shares of our common stock issuable upon conversion of our outstanding Series B Convertible Preferred Stock;
-

1,760,000 shares of our common stock issuable upon conversion of our Series C Preferred Stock;

•

1,708 shares of our common stock issuable upon conversion of our outstanding convertible notes; and

•

441,334 shares of our common stock available for awards under our 2006 Equity Incentive Plan and 2017 Stock Option and Incentive Plan.

To the extent we issue additional equity securities in connection with future capital raising activities, our then-existing stockholders may experience dilution.

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DESCRIPTION OF SECURITIES

General

Our authorized capital stock consists of 150,000,000 shares of common stock, \$0.01 par value per share, and 15,000,000 shares of preferred stock, \$0.01 par value per share. As of December 31, 2017 there were 10,196,620 shares of our common stock outstanding, 2,387 shares of our Series B Preferred Stock outstanding, 2,548 shares of our Series C Preferred Stock outstanding and warrants to purchase 6,197,681 shares of our common stock outstanding. The following summary description of our capital stock is based on the provisions of our amended and restated certificate of incorporation, amended and restated bylaws, certificate of designations, outstanding warrants and the applicable provisions of the Delaware General Corporation Law. This summary does not purport to be complete and is qualified entirely by reference to the applicable provisions of our amended and restated certificate of incorporation, amended and restated bylaws, certificate of designations, outstanding warrants and the Delaware General Corporation Law. For information on how to obtain copies of our amended and restated certificate of incorporation, amended and restated bylaws, certificate of designations and forms of our outstanding warrants, see “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference.”

Common Stock

We may issue shares of our common stock from time to time. Holders of our common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. Holders of our common stock do not have cumulative voting rights in the election of directors. Subject to the preferences that may be applicable to any then outstanding preferred stock, holders of common stock are entitled to receive ratably such dividends, if any, as may be declared by our Board of Directors out of funds legally available therefor. Upon the liquidation, dissolution, or winding up of our company, holders of common stock are entitled to share ratably in all of our assets which are legally available for distribution after payment of all debts and other liabilities and liquidation preference of any outstanding preferred stock. There are no sinking fund provisions applicable to our common stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. 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 have designated and issued and may designate and issue in the future.

Preferred Stock

We may issue shares of our preferred stock from time to time, in one or more series. The 15,000,000 shares of preferred stock authorized are undesignated as to preferences, privileges and restrictions, other than as set forth herein. Our Board of Directors will determine the rights, preferences and privileges of the shares of each wholly unissued series, and any qualifications, limitations or restrictions thereon, including dividend rights, conversion rights, terms of redemption or repurchase, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series.

The General Corporation Law of the State of Delaware, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class (or, in some cases, as a series) on an amendment to our amended and restated certificate of incorporation if the amendment would change the par value, the number of authorized shares of the class or the powers, preferences or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

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 our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, financings 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 our common stock and the voting and other rights of the holders of our common stock.

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Series B Preferred Stock

On August 25, 2017, we filed a Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock, or the Series B Certificate of Designation, with the State of Delaware which designates 6,900 shares of our preferred stock as Series B Senior Convertible Preferred Stock, or the Series B Preferred Stock. The Series B Preferred Stock has a stated value of \$1,000 per share and a par value of \$0.01 per share. If, prior to the second anniversary of the original issue date of the Series B Preferred Stock, we sell or grant any option to purchase or sell or grant any right to reprice, or otherwise dispose of or issue, any of our common stock or securities convertible into or exercisable for shares of our common stock at an effective price per share that is lower than the then effective conversion price, then the conversion price will be reduced to equal the higher of (A) such lower price or (B) \$0.05, subject to an exception for the following types of issuances (i) issuances to our employees, officers or directors pursuant to any stock or option plan adopted by a majority of the non-employee members of our Board of Directors or committee thereof, (ii) issuances upon the exercise or exchange of any securities issued in connection with the August 2017 Offering or convertible into shares of common stock issued and outstanding on the date of the underwriting agreement entered into in connection with the August 2017 Offering, provided that such securities have not been amended since the date of the underwriting agreement to increase the number of securities or decrease the exercise, exchange or conversion price, or (iii) issuances pursuant to acquisitions or strategic transactions approved by a majority of the disinterested members of our Board of Directors, provided that such securities are “restricted securities” under Rule 144 and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the 90-day period following the original issuance date of the Series B Preferred Stock, and provided that any such issuance is to a person or its equityholders that is an operating company or an owner of an asset in a business synergistic with the business of our company and will provide our company with additional benefits in addition to the investment of funds, but will not include a transaction in which we issue securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities (the issuances referred to in (i) through (iii) above, the “Exempt Issuances”).

In the event of a liquidation, the holders of Series B Preferred Shares are entitled to an amount equal to the par value of the Series B Preferred Stock and thereafter to participate on an as-converted-to-common stock basis with holders of the common stock in any distribution of assets of the Company to the holders of the common stock. The Series B Certificate of Designation provides, among other things, that we will not pay any dividends on shares of common stock (other than dividends in the form of common stock) unless and until such time as we pay dividends on each Series B Preferred Share on an as-converted basis. Other than as set forth in the previous sentence, the Series B Certificate of Designation provides that no other dividends will be paid on Series B Preferred Shares and that we will pay no dividends (other than dividends in the form of common stock) on shares of common stock unless we simultaneously comply with the previous sentence. The Series B Certificate of Designation does not provide for any restriction on the repurchase of Series B Preferred Shares by us while there is any arrearage in the payment of dividends on the Series B Preferred Shares. There are no sinking fund provisions applicable to the Series B Preferred Shares.

In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our shares of common stock are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the Series B Preferred Shares will be entitled to receive upon conversion of the Series B Preferred Shares the same kind and amount of securities, cash or property which the holders would have received had they converted the Series B Preferred Shares immediately prior to such fundamental transaction. Any successor to us or surviving entity is required to assume the obligations under the Series B Preferred Shares.

Notwithstanding the foregoing, in the event we are not the surviving entity of a fundamental transaction or in the event of a reverse merger or similar transaction where we are the surviving entity, then, automatically and contemporaneous with the consummation of such transaction, the surviving entity (or our company in the event of a reverse merger or similar transaction) will purchase the then outstanding

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shares of Series B Preferred Stock by paying and issuing, in the event that such consideration given to the holders of our common stock is non-cash consideration, as the case may be, to each holder an amount equal to the cash consideration plus the non-cash consideration in the form issuable to the holders of our common stock (in the case of a reverse merger or similar transaction, shares of common stock issuable to the holders of the acquired company) per share of our common stock in the fundamental transaction multiplied by the number of shares of common stock underlying the shares of Series B Preferred Stock held by the holder on the date immediately prior to the consummation of the fundamental transaction. Such amount will be paid in the same form and mix (whether securities, cash or property, or any combination of the foregoing) as the consideration received by holders of our common stock in the fundamental transaction.

With certain exceptions, as described in the Series B Certificate of Designation, shares of Series B Preferred Stock, or Series B Preferred Shares, have no voting rights. However, as long as any shares of Series B Preferred Shares remain outstanding, the Series B Certificate of Designation provides that we may not, without the affirmative vote of holders of a majority of the then-outstanding Series B Preferred Shares, (a) alter or change adversely the powers, preferences or rights given to the Series B Preferred Shares or alter or amend the Series B Certificate of Designation, (b) increase the number of authorized shares of Series B Preferred Shares or (c) amend our Certificate of Incorporation or other charter documents in any manner that adversely affects any rights of holders of Series B Preferred Shares.

Each Series B Preferred Share is convertible at any time at the holder's option into a number of shares of common stock equal to \$1,000 divided by the Series B Conversion Price. The "Series B Conversion Price" was initially \$2.50 and is subject to adjustment for stock splits, stock dividends, distributions, subdivisions and combinations and, as discussed above, certain dilutive issuances of our common stock or securities convertible into or exercisable for shares of our common stock. The Series B Conversion Price was reduced to \$1.40 as a result of our November 2017 Offering, subject to further adjustment as set forth in the Series B Certificate of Designation. Notwithstanding the foregoing, the Series B Certificate of Designation further provides that we may not effect any conversion of Series B Preferred Shares, with certain exceptions, to the extent that, after giving effect to an attempted conversion, the holder of Series B Preferred Shares (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of our common stock in excess of 4.99% (or, at the election of the holder, 9.99%) of the shares of our common stock then outstanding after giving effect to such exercise (the "Preferred Stock Beneficial Ownership Limitation"); provided, however, that upon notice to the Company, the holder may increase or decrease the Preferred Stock Beneficial Ownership Limitation, provided that in no event may the Preferred Stock Beneficial Ownership Limitation exceed 9.99% and any increase in the Preferred Stock Beneficial Ownership Limitation will not be effective until 61 days following notice of such increase from the holder to us.

Series C Preferred Stock

On November 6, 2017, we filed a Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock, or the Series C Certificate of Designation, with the State of Delaware which designates 2,748 shares of our preferred stock as Series C Convertible Preferred Stock, or the Series C Preferred Stock. The Series C Preferred Stock has a stated value of \$1,000 per share and a par value of \$0.01 per share.

If prior to the second anniversary of the original issue date of the Series C Preferred Stock, we sell or grant any option to purchase or sell or grant any right to reprice, or otherwise dispose of or issue, any of our common stock or securities convertible into or exercisable for shares of our common stock at an effective price per share that is lower than the then effective conversion price, then the conversion price will be reduced to equal the higher of (A) such lower price or (B) \$0.05, subject to an exception for the following types of issuances (i) issuances to our employees, officers or directors pursuant to any stock or option plan adopted by a majority of the non-employee members of our Board of Directors or committee thereof, (ii) issuances upon the exercise or exchange of any securities issued in connection with our November 2017 Offering or convertible into shares of common stock issued and outstanding on the date of the placement agency agreement entered into in connection with our November 2017 Offering, provided that such securities have not been amended since the date of the placement agency agreement to increase the number

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of securities or decrease the exercise, exchange or conversion price, or (iii) issuances pursuant to acquisitions or strategic transactions approved by a majority of the disinterested members of our Board of Directors, provided that such securities are “restricted securities” under Rule 144 and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the 90-day period following the original issuance date of the Series C Preferred Stock, and provided that any such issuance is to a person or its equityholders that is an operating company or an owner of an asset in a business synergistic with the business of our company and will provide our company with additional benefits in addition to the investment of funds, but will not include a transaction in which we issue securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities (the issuances referred to in (i) through (iii) above, the “Exempt Issuances”).

In the event of a liquidation, the holders of shares of Series C Preferred Stock, or Series C Preferred Shares, are entitled to an amount equal to the par value of the Series C Preferred Stock and thereafter to participate on an as-converted-to-common stock basis with holders of the common stock in any distribution of assets of the Company to the holders of the common stock. The Series C Certificate of Designation provides, among other things, that we will not pay any dividends on shares of common stock (other than dividends in the form of common stock) unless and until such time as we pay dividends on each Series C Preferred Share on an as-converted basis. Other than as set forth in the previous sentence, the Series C Certificate of Designation provides that no other dividends will be paid on Series C Preferred Shares and that we will pay no dividends (other than dividends in the form of common stock) on shares of common stock unless we simultaneously comply with the previous sentence. The Series C Certificate of Designation does not provide for any restriction on the repurchase of Series C Preferred Shares by us while there is any arrearage in the payment of dividends on the Series C Preferred Shares. There are no sinking fund provisions applicable to the Series C Preferred Shares.

In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our shares of common stock are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the Series C Preferred Shares will be entitled to receive upon conversion of the Series C Preferred Shares the same kind and amount of securities, cash or property which the holders would have received had they converted the Series C Preferred immediately prior to such fundamental transaction. Any successor to us or surviving entity is required to assume the obligations under the Series C Preferred Shares.

Notwithstanding the foregoing, in the event we are not the surviving entity of a fundamental transaction or in the event of a reverse merger or similar transaction where we are the surviving entity, then, automatically and contemporaneous with the consummation of such transaction, the surviving entity (or our company in the event of a reverse merger or similar transaction) will purchase the then outstanding shares of Series C Preferred Stock by paying and issuing, in the event that such consideration given to the holders of our common stock is non-cash consideration, as the case may be, to each holder an amount equal to the cash consideration plus the non-cash consideration in the form issuable to the holders of our common stock (in the case of a reverse merger or similar transaction, shares of common stock issuable to the holders of the acquired company) per share of our common stock in the fundamental transaction multiplied by the number of shares of common stock underlying the shares of Series C Preferred Stock held by the holder on the date immediately prior to the consummation of the fundamental transaction. Such amount will be paid in the same form and mix (whether securities, cash or property, or any combination of the foregoing) as the consideration received by holders of our common stock in the fundamental transaction.

With certain exceptions, as described in the Series C Certificate of Designation, the Series C Preferred Shares have no voting rights. However, as long as any shares of Series C Preferred Shares remain outstanding, the Series C Certificate of Designation provides that we may not, without the affirmative vote of holders of a majority of the then-outstanding Series C Preferred Shares, (a) alter or change adversely the powers, preferences or rights given to the Series C Preferred Shares or alter or amend the Series C Certificate of Designation, (b) increase the number of authorized shares of Series C Preferred Shares or (c) amend our Certificate of Incorporation or other charter documents in any manner that adversely affects any rights of holders of Series C Preferred Shares.

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Each Series C Preferred Share is convertible at any time at the holder's option into a number of shares of common stock equal to \$1,000 divided by the Series C Conversion Price. The "Series C Conversion Price" is initially \$1.40 and is subject to adjustment for stock splits, stock dividends, distributions, subdivisions and combinations and, as discussed above, certain dilutive issuances of our common stock or securities convertible into or exercisable for shares of our common stock. Notwithstanding the foregoing, the Series C Certificate of Designation further provides that we may not effect any conversion of Series C Preferred Shares, with certain exceptions, to the extent that, after giving effect to an attempted conversion, the holder of Series C Preferred Shares (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of our common stock in excess of 4.99% (or, at the election of the holder, 9.99%) of the shares of our common stock then outstanding after giving effect to such exercise (the "Preferred Stock Beneficial Ownership Limitation"); provided, however, that upon notice to the Company, the holder may increase or decrease the Preferred Stock Beneficial Ownership Limitation, provided that in no event may the Preferred Stock Beneficial Ownership Limitation exceed 9.99% and any increase in the Preferred Stock Beneficial Ownership Limitation will not be effective until 61 days following notice of such increase from the holder to us.

The Series C Certificate of Designation provides that we will not be obligated to issue any shares of common stock, and a holder will not have the right to convert any portion of the Series C Preferred Stock, if such issuance (taken together with any prior issuance of shares of common stock upon conversion of the Series C Preferred Stock) would exceed 1,961,914 shares of common stock, which is the aggregate number of shares of common stock which we may issue upon conversion of the Series C Preferred Stock without breaching our obligations under the rules or regulations of the Nasdaq Capital Market, except that such limitation will not apply in the event that we (A) obtain the approval of our stockholders as required by the applicable rules of the Nasdaq Capital Market for issuances of common stock in excess of such number of shares of common stock or (B) obtain a written opinion from our outside counsel that such approval is not required, which opinion will be reasonably satisfactory to the holder. Because we obtained the approval of our stockholders on January 30, 2018, the foregoing limitation is no longer operative.

The Series C Certificate of Designation also prohibits us from issuing any shares of common stock or securities convertible or exercisable into common stock at a price per share below the then effective conversion price of the Series C Preferred Stock, subject to certain exceptions, or entering into any agreement or making any public announcement with respect to such a dilutive issuance, until we have filed a proxy statement under Section 14(a) of the Exchange Act or information statement pursuant to Section 14(c) of the Exchange Act with the SEC and obtained approval of the November 2017 Offering from our stockholders, including approval of issuances in excess of the maximum number of shares issuable under the rules and regulations of the Nasdaq Capital Market. Because we filed a proxy statement and obtained stockholder approval of the November 2017 Offering on January 30, 2018, the foregoing restriction is no longer operative.

Warrants

Series A Conversion Warrants

In August 2017, we issued warrants, or the Series A Conversion Warrants, to purchase 856,446 shares of our common stock to the former holders of our Series A Preferred Stock as consideration for the conversion of their shares of Series A Preferred Stock into shares of common stock.

Term. The Series A Conversion Warrants are exercisable for five years.

Exercisability. The Series A Conversion Warrants are exercisable at any time after their original issuance, on August 28, 2017, and at any time up to the date that is five years after their original issuance. The Series A Conversion Warrants are exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice and, at any time a registration statement registering the issuance of the shares of common stock underlying the Series A Conversion Warrants under the Securities Act is effective and available for the issuance of such shares, or an exemption from registration under the Securities Act is available for the issuance of such shares, by payment in full in immediately available funds for the number of shares of common stock purchased upon such exercise. If a registration statement

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registering the issuance of the shares of common stock underlying the Series A Conversion Warrants under the Securities Act is not effective or available and an exemption from registration under the Securities Act is not available for the issuance of such shares, the holder may, in its sole discretion, elect to exercise the Series A Conversion Warrant through a cashless exercise, in which case the holder would receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the Series A Conversion Warrant. No fractional shares of common stock will be issued in connection with the exercise of a Series A Conversion Warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price.

Exercise Limitation. A holder does not have the right to exercise any portion of the Series A Conversion Warrant if the holder (together with its affiliates) would beneficially own in excess of 4.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Series A Conversion Warrants. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99% upon at least 61 days' prior notice from the holder to us.

Exercise Price. The exercise price per whole share of common stock purchasable upon exercise of the Series A Conversion Warrants is \$10.00 per share of common stock. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and also upon any distributions of assets, including cash, stock or other property to our stockholders.

Transferability. Subject to applicable laws, the Series A Conversion Warrants may be offered for sale, sold, transferred or assigned without our consent.

Fundamental Transactions. In the event of a fundamental transaction, as described in the Series A Conversion Warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common stock, the holders of the Series A Conversion Warrants will be entitled to receive upon exercise of the Series A Conversion Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Series A Conversion Warrants immediately prior to such fundamental transaction.

Rights as a Stockholder. Except as otherwise provided in the Series A Conversion Warrants or by virtue of such holder's ownership of shares of our common stock, the holder of a Series A Conversion Warrant does not have the rights or privileges of a holder of our common stock, including any voting rights, until the holder exercises the Series A Conversion Warrant.

Note Conversion Warrants

In August 2017, we issued warrants, or the Note Conversion Warrants, to purchase 359,999 shares of our common stock to the former holders of certain of our convertible promissory notes as consideration for the conversion of their convertible promissory notes into shares of common stock.

Term. The Note Conversion Warrants are exercisable for five years.

Exercisability. The Note Conversion Warrants are exercisable at any time after their original issuance, on August 28, 2017, and at any time up to the date that is five years after their original issuance. The Note Conversion Warrants are exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice and, at any time a registration statement registering the issuance of the shares of common stock underlying the Note Conversion Warrants under the Securities Act is effective and available for the issuance of such shares, or an exemption from registration under the Securities Act is available for the issuance of such shares, by payment in full in immediately available funds for the number of shares of common stock purchased upon such exercise. If a registration statement registering the issuance of the shares of common stock underlying the Note Conversion Warrants under the Securities Act is not effective or available and an exemption from registration under the Securities Act is not available for the issuance of such shares, the holder may, in its sole discretion, elect to exercise the Note Conversion

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Warrant through a cashless exercise, in which case the holder would receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the Note Conversion Warrant. No fractional shares of common stock will be issued in connection with the exercise of a Note Conversion Warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price.

Exercise Limitation. A holder does not have the right to exercise any portion of the Note Conversion Warrant if the holder (together with its affiliates) would beneficially own in excess of 4.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Note Conversion Warrants. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99% upon at least 61 days' prior notice from the holder to us.

Exercise Price. As a result of our November 2017 Offering, the exercise price per whole share of common stock purchasable upon exercise of the Note Conversion Warrants was reduced to \$1.40 per share of common stock, subject to further adjustment as set forth below. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and also upon any distributions of assets, including cash, stock or other property to our stockholders. If, at any time while the Note Conversion Warrants are outstanding, we sell or grant any option to purchase or sell or grant any right to reprice, or otherwise dispose of or issue, any of our common stock or securities convertible into or exercisable for shares of our common stock at an effective price per share that is lower than the exercise price then in effect, then the exercise price will be reduced to equal the higher of (A) such lower price or (B) \$0.05, subject to an exception for the following types of issuances (i) issuances to our employees, officers or directors pursuant to any stock or option plan adopted by a majority of the non-employee members of our Board of Directors or committee thereof, (ii) issuances upon the exercise or exchange of any securities issued in connection with this offering or convertible into shares of common stock issued and outstanding on the date of the issuance of the Note Conversion Warrants, provided that such securities have not been amended since the date of the issuance of the Note Conversion Warrants to increase the number of securities or decrease the exercise, exchange or conversion price, or (iii) issuances pursuant to acquisitions or strategic transactions approved by a majority of the disinterested members of our Board of Directors, provided that such securities are "restricted securities" under Rule 144 and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the 90-day period following the date of the issuance of the Note Conversion Warrants, and provided that any such issuance is to a person or its equityholders that is an operating company or an owner of an asset in a business synergistic with the business of our company and will provide our company with additional benefits in addition to the investment of funds, but will not include a transaction in which we issue securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

Transferability. Subject to applicable laws, the Note Conversion Warrants may be offered for sale, sold, transferred or assigned without our consent.

Fundamental Transactions. In the event of a fundamental transaction, as described in the Note Conversion Warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common stock, the holders of the Note Conversion Warrants will be entitled to receive upon exercise of the Note Conversion Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Note Conversion Warrants immediately prior to such fundamental transaction.

Rights as a Stockholder. Except as otherwise provided in the Note Conversion Warrants or by virtue of such holder's ownership of shares of our common stock, the holder of a Note Conversion Warrant does not have the rights or privileges of a holder of our common stock, including any voting rights, until the holder exercises the Note Conversion Warrant.

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November 2017 Offering Warrants

In November 2017, we issued warrants, or the November 2017 Offering Warrants, to purchase 1,962,857 shares of our common stock at an exercise price of \$1.63 per share.

Exercisability. The November 2017 Offering Warrants are exercisable at any time six months after their original issuance, on November 9, 2017, and at any time up to the date that is five years after the date on which they become exercisable. The November 2017 Offering Warrants are exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice and, at any time a registration statement registering the issuance of the shares of common stock underlying the November 2017 Offering Warrants under the Securities Act is effective and available for the issuance of such shares, or an exemption from registration under the Securities Act is available for the issuance of such shares, by payment in full in immediately available funds for the number of shares of common stock purchased upon such exercise. If a registration statement registering the issuance of the shares of common stock underlying the November 2017 Offering Warrants under the Securities Act is not effective or available and an exemption from registration under the Securities Act is not available for the issuance of such shares, the holder may, in its sole discretion, elect to exercise the November 2017 Offering Warrant through a cashless exercise, in which case the holder would receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the November 2017 Offering Warrant. No fractional shares of common stock will be issued in connection with the exercise of a November 2017 Offering Warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price.

Exercise Limitation. A holder will not have the right to exercise any portion of the November 2017 Offering Warrant if the holder (together with its affiliates) would beneficially own in excess of 4.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the November 2017 Offering Warrants. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99% upon at least 61 days' prior notice from the holder to us.

Exercise Price. The exercise price per whole share of common stock purchasable upon exercise of the November 2017 Offering Warrants is \$1.63 per share of common stock. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and also upon any distributions of assets, including cash, stock or other property to our stockholders. If, at any time while the November 2017 Offering Warrants are outstanding, we sell or grant any option to purchase or sell or grant any right to reprice, or otherwise dispose of or issue, any of our common stock or securities convertible into or exercisable for shares of our common stock at an effective price per share that is lower than the exercise price then in effect, then the exercise price will be reduced to equal the higher of (A) such lower price or (B) \$0.05, subject to an exception for the following types of issuances (i) issuances to our employees, officers or directors pursuant to any stock or option plan adopted by a majority of the non-employee members of our Board of Directors or committee thereof, (ii) issuances upon the exercise or exchange of any securities issued in connection with the November 2017 Offering or convertible into shares of common stock issued and outstanding on the date of the issuance of the November 2017 Offering Warrants, provided that such securities have not been amended since the date of the issuance of the November 2017 Offering Warrants to increase the number of securities or decrease the exercise, exchange or conversion price, or (iii) issuances pursuant to acquisitions or strategic transactions approved by a majority of the disinterested members of our Board of Directors, provided that such securities are "restricted securities" under Rule 144 and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the 90-day period following the date of the issuance of the November 2017 Offering Warrants, and provided that any such issuance is to a person or its equityholders that is an operating company or an owner of an asset in a business synergistic with the business of our company and will provide our company with additional benefits in addition to the investment of funds, but will not include a transaction in which we issue securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

Transferability. Subject to applicable laws, the November 2017 Offering Warrants may be offered for sale, sold, transferred or assigned without our consent.

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Fundamental Transactions. In the event of a fundamental transaction, as described in the November 2017 Offering Warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common stock, the holders of the November 2017 Offering Warrants will be entitled to receive upon exercise of the November 2017 Offering Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the November 2017 Offering Warrants immediately prior to such fundamental transaction.

Rights as a Stockholder. Except as otherwise provided in the November 2017 Offering Warrants or by virtue of such holder's ownership of shares of our common stock, the holder of a November 2017 Offering Warrant does not have the rights or privileges of a holder of our common stock, including any voting rights, until the holder exercises the November 2017 Offering Warrant.

August 2017 Offering Warrants

In August 2017, we issued warrants, or the August 2017 Offering Warrants, to purchase 2,680,000 shares of our common stock at an exercise price of \$3.00 per share. The exercise price of the August 2017 Offering Warrants was reduced to \$1.40 as a result of our November 2017 Offering, subject to further adjustment as set forth in the August 2017 Offering Warrants.

The terms of the August 2017 Offering Warrants are substantially the same as those of the Note Conversion Warrants.

Underwriter Warrants

In connection with the August 2017 Offering, we issued warrants, or the Underwriter Warrants, to purchase 60,000 shares of our common stock to designees of the underwriter of the August 2017 Offering. The Underwriter Warrants are exercisable for cash or on a cashless basis at a per share exercise price equal to \$3.125, are exercisable beginning one year after the effective date of the August 2017 Offering and expiring on a date which is no more than five years from the effective date of the August 2017 Offering. The Underwriter Warrants provide for registration rights, including unlimited piggyback registration rights. The exercise price and number of shares of our common stock issuable upon exercise of the Underwriter Warrants may be adjusted in certain circumstances including in the event of a stock dividend, extraordinary cash dividend or our recapitalization, reorganization, merger or consolidation. However, the exercise price or underlying shares will not be adjusted for issuances of shares of our common stock at a price below the exercise price of the Underwriter Warrants.

Bridge Warrants

In connection with the Merger, on June 29, 2017, we issued warrants, or the Bridge Warrants, to purchase 45,600 shares of our common stock at an exercise price of \$7.50 per share (subject to adjustment as described below).

Term. The Bridge Warrants are exercisable for five years.

Exercise Price. The exercise price of the Bridge Warrants was \$7.50 per share when issued. The exercise price and number of shares of our common stock issuable upon the exercise of the Bridge Warrants is subject to adjustment in the event of any stock dividends and splits, reverse stock split, recapitalization, reorganization or similar transaction. In addition, if we complete a financing resulting in at least \$5,500,000 of gross proceeds, the exercise price will become the lower of (i) \$7.50 or (ii) 110% of the per share offering price in such financing, but in no event lower than \$1.50 per share. The exercise price of the Bridge Warrants was reduced to \$2.75 as a result of our August 2017 Offering.

Exercisability. The Bridge Warrants became exercisable on the date of issuance and are exercisable at any time for five years thereafter. The Bridge Warrants are exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise. If there is no effective registration statement registering the issuance of the shares underlying the Bridge Warrants, then the Bridge Warrants may be exercised by means of a cashless exercise.

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Beneficial Ownership Limitation. A holder of Bridge Warrants does not have the right to exercise any portion of its warrants to the extent the holder, together with its affiliates, would beneficially own in excess of 4.99% of the number of shares of our common stock outstanding immediately after giving effect to such exercise.

No Fractional Shares. No fractional shares shall be issued upon the exercise of the Bridge Warrants; instead the number of shares of common stock to be issued will be rounded up to the nearest whole number.

Transferability. Subject to applicable laws, the Bridge Warrants may be transferred at the option of the holder upon surrender of the Bridge Warrants to us together with the appropriate instruments of transfer, provided that we may require an opinion of counsel in connection with certain transfers.

Authorized Shares. During the period the Bridge Warrants are outstanding, we will reserve from our authorized and unissued common stock a sufficient number of shares to provide for the issuance of shares of common stock underlying the Bridge Warrants upon the exercise of the Bridge Warrants.

Fundamental Transactions. In the event of any fundamental transaction, as described in the Bridge Warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent exercise of a Bridge Warrant the holder shall have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of us, if we are the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the Bridge Warrant is exercisable immediately prior to such event.

Purchase Rights. If we grant, issue or sell any options, convertible securities or rights to purchase stock, warrants, securities or other property pro rata to the holders of our common stock, then a holder of Bridge Warrants has the right to acquire such purchase rights which the holder could have acquired had the holder exercised the Bridge Warrant immediately prior to the record date for the grant, issuance or sale of such purchase right, subject to certain limitations.

Rights as a Stockholder. Except as otherwise provided in the Bridge Warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the Bridge Warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their Bridge Warrants.

Side Warrants

On June 29, 2017, we issued warrants, or the Side Warrants, to purchase 91,429 shares of our common stock at an exercise price of \$7.00 per share (subject to adjustment as described below).

Term. The Side Warrants are exercisable for five years.

Exercise Price. The exercise price of the Side Warrants is \$7.00 per share. The exercise price and number of shares of our common stock issuable upon the exercise of the Side Warrants is subject to adjustment in the event of any stock dividends and splits, reverse stock split, recapitalization, reorganization or similar transaction.

Exercisability. The Side Warrants became exercisable as to 22,857 shares of our common stock on the date of issuance and will become exercisable as to the remaining 68,572 shares of our common stock upon the holder's performance of certain obligations as set forth in the Side Warrants. The Side Warrants are exercisable, at the option of the holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise. If there is no effective registration statement registering the issuance of the shares underlying the Side Warrants, then the Side Warrants may be exercised by means of a cashless exercise.

No Fractional Shares. No fractional shares shall be issued upon the exercise of the Side Warrants; instead the number of shares of common stock to be issued will be rounded down to the nearest whole number and we will pay the holder in cash the fair market value for any such fractional shares.

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Transferability. Subject to applicable laws and certain restrictions set forth in the Side Warrants, the Side Warrants may be transferred at the option of the holder upon surrender of the Side Warrants to us together with the appropriate instruments of transfer, provided that we may require an opinion of counsel in connection with certain transfers.

Authorized Shares. During the period the Side Warrants are outstanding, we will reserve from our authorized and unissued common stock a sufficient number of shares to provide for the issuance of shares of common stock underlying the Side Warrants upon the exercise of the Side Warrants.

Fundamental Transactions. In the event of any fundamental transaction, as described in the Side Warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then the holder shall have the right to exercise the Side Warrants contingent and effective upon the closing of such fundamental transaction.

Distribution. If we distribute to holders of our common stock for no consideration evidences of our indebtedness, any security or rights to purchase any security, or any other asset, then upon any exercise of the Side Warrants that occurs after the record date for stockholders to receive such distribution, the holder will be entitled to receive such distribution as the holder would have been entitled to receive had the holder exercised the Side Warrants immediately prior to such record date.

Rights as a Stockholder. Except as otherwise provided in the Side Warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the Side Warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their Side Warrants.

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PLAN OF DISTRIBUTION

We have entered into an Equity Purchase Agreement with Leviston Resources LLC, or the Investor, relating to shares of our common stock offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of such agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$8,000,000, or the Aggregate Amount, from time to time to the Investor. The Investor has agreed to make an initial investment of \$750,000 following the close of business on February 9, 2018 at a price of \$1.04 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made in sales deemed to be “at-the-market” equity offerings as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, or the Securities Act, at a purchase price equal to 97.25% of the volume weighted average sales price, or VWAP, of the common stock reported on the date that the Investor receives a capital call from us. On any business day, we have the right to direct the Investor to purchase up to \$25,000 shares of our common stock or 30% of the 30-day average share volume of our common stock, up to a maximum of \$150,000 per business day unless otherwise agreed by the Investor. The Investor will be not be required to purchase shares in excess of 19.99% of our issued and outstanding shares as of the date of the equity purchase agreement, subject to certain limited exceptions. If the market price of our common stock is below \$0.25, the Investor’s obligation to purchase shares will automatically be suspended unless waived by the Investor.

In addition to the regular purchases described above, if we have delivered a purchase notice by 9 am on the date of purchase, we may direct the Investor to make additional purchases on the same date as set forth below:

(a)

we can require the Investor to purchase up to 1.5 times the amount of the shares traded between 7 am and 9:15 am, provided that the amount of such additional purchases will not exceed \$2,250,000, unless waived by the Investor, subject to a 9.99% affiliate blocker. The price of such additional purchases will be equal to the lesser of: (i) 95% of the VWAP on the day of the additional purchase and (ii) the closing price of our common stock on the day of the additional purchase. We may increase the number of the additional shares to be purchased if agreed by the Investor; or

(b)

we can direct the Investor to accept an additional purchase on the purchase date calculated by reference to the anticipated daily volume, or ADV, of our common stock on the purchase date. If by 10 am on the purchase date the ADV* is greater than two times the 30-day average volume, we can direct the Investor to purchase additional shares in the following breakdown, provided that the amount of additional purchases will not exceed \$2,250,000, unless waived by the Investor:

| ADV | Additional Shares |
|----------------|-------------------|
| >3.00x and <6x | 20% of ADV |
| >6.01x | 25% of ADV |

The purchase price of the additional purchases will be equal to the lesser of: (i) 95% of the VWAP on the purchase date and (ii) the closing price of our common stock on the additional purchase date.

*

ADV will be calculated by comparing minute-by-minute volume between 9:30am and 10:00am on the Purchase Date to the average minute-by-minute volume for the previous 30 days and using that difference as a coefficient for an ADV amount.

Example: 30-day average daily volume is 1,000 shares. Average 30-day volume between 9:30am and 10:00am is 100 shares. Assuming that on the purchase date, the 9:30am-10:00am volume is 700 shares. $ADV = 7x$. Additional purchases can be in the amount of $1,000 \times 7 \times 25\% = 1,750$ shares.

We estimate that the total gross proceeds from this offering will be approximately \$8.0 million. We estimate the total expenses of this offering, excluding the discount to the Investor, will be approximately \$0.6 million of which \$0.4 million will be paid in stock. As consideration for the Investor entering into the Equity Purchase Agreement, we have agreed to pay to the Investor a commitment fee in shares of our common stock, or the Commitment Shares, equal in value to 5.25% of the total Aggregate Amount,

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payable as follows: 1.75% before February 12, 2018; 1.75% on the third calendar day after the date on which the registration statement on Form S-1 that we plan to file with the SEC is declared effective by the SEC; and 1.75% on the thirtieth calendar day after the date on which such registration statement on Form S-1 is declared effective by the SEC. If we fail to deliver the Commitment Shares within one business day of the date on which they are due under the Equity Purchase Agreement, we will be required to pay the Investor liquidated damages in an amount equal to \$10,000 plus an additional \$1,000 per day until the Commitment Shares are delivered. We also agreed to provide “most favored nation” status to the Investor with respect to other equity offerings until the date on which the registration statement on Form S-1 that we are required to file with the SEC pursuant to the terms of the Equity Purchase Agreement is declared effective by the SEC.

We have agreed to pay to the Investor, on each day the Investor receives a capital call from us, all expenses associated with depositing, clearing, selling and mailing of the stock certificates, a fee of 0.75% of any amount purchased by the Investor. In addition we have agreed to reimburse \$35,000 to the Investor for a documentation fee for preparing the equity purchase agreement, of which \$15,000 will be refunded by the Investor on the earlier of 60 days after the signing of the equity purchase agreement and the third purchase by the Investor under the equity purchase agreement. Because our existing registration statement on Form S-3 will expire on February 13, 2018 and, due to the timing of the filing of our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, we will not be eligible to file a new Form S-3 registration statement until September 1, 2018, we have agreed to prepare and file with the SEC a registration statement on Form S-1, or the S-1 Registration Statement, by April 15, 2018 and to use reasonable best efforts to cause the S-1 Registration Statement to be declared effective by the SEC within ninety days thereafter. If we do not file the S-1 Registration Statement with the SEC by April 15, 2018, we will be required to pay to the Investor liquidated damages in the amount of \$100,000. In addition, if we do not file the S-1 Registration Statement with the SEC by April 15, 2018, we will be required to pay to the Investor liquidated damages as follows: commencing April 16, 2018, for the first ten days thereafter, \$1 for every \$1,000 of the Aggregate Amount to be registered on the S-1 Registration Statement, then \$3 for every \$1,000 of the Aggregate Amount to be registered on the S-1 Registration Statement for every day for days 11 through 20 thereafter, and thereafter \$5 for every \$1,000 of the Aggregate Amount to be registered on the S-1 Registration Statement for every day beyond day 20. We are also required to pay liquidated damages of \$100,000 on each event of default under the Equity Purchase Agreement. The Investor may be deemed to be an “underwriter” within the meaning of the Securities Act and any broker-dealers or agents that are involved in selling the shares may also be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Because the Investor may be an “underwriter” within the meaning of the Securities Act, the Investor will be subject to the prospectus delivery requirements of the Securities Act. This prospectus may be made available and distributed to investors in electronic format.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Investor will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of securities of the common stock by the Investor.

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LEGAL MATTERS

The validity of the issuance of the securities offered hereby will be passed upon for us by Goodwin Procter LLP, New York, New York.

EXPERTS

The financial statements of Precipio Diagnostics, LLC as of and for the year ended December 31, 2016 appearing in our Current Report on Form 8-K/A, filed with the SEC on July 31, 2017, have been audited by Marcum LLP, an independent auditing firm, to the extent and period as set forth in their report thereon, and incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing. The financial statements of Precipio Diagnostics, LLC as of and for the year ended December 31, 2015 appearing in our Current Report on Form 8-K/A, filed with the SEC on July 31, 2017, have been audited by Whittlesey PC (formerly Whittlesey & Hadley, P.C.), an independent auditing firm, to the extent and period as set forth in their report thereon, and incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing. The consolidated financial statements of Precipio, Inc. (formerly Transgenomic, Inc.) as of and for the year ended December 31, 2016 appearing in our Annual Report on Form 10-K filed for the year ended December 31, 2016, have been audited by Marcum LLP, independent registered public accounting firm, to the extent and period as set forth in their report thereon, and incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing. The consolidated financial statements of Precipio, Inc. (formerly Transgenomic, Inc.) as of and for the year ended December 31, 2015 appearing in our Annual Report on Form 10-K filed for the year ended December 31, 2015, have been audited by Ernst & Young LLP, independent registered public accounting firm, to the extent and period as set forth in their report thereon, and incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. The SEC's website contains reports, proxy and information statements and other information regarding issuers, such as us, that file electronically with the SEC. You may also read and copy any document we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of its Public Reference Room.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus supplement the information we have filed with the SEC. The information we incorporate by reference into this prospectus supplement is an important part of this prospectus supplement. Any statement in a document we incorporate by reference into this prospectus supplement or the accompanying prospectus will be considered to be modified or superseded to the extent a statement contained in this prospectus supplement or any other subsequently filed document that is incorporated by reference into this prospectus supplement modifies or supersedes that statement. The modified or superseded statement will not be considered to be a part of this prospectus supplement or accompanying prospectus, as applicable, except as modified or superseded.

We incorporate by reference into this prospectus supplement the information contained in the documents listed below, which is considered to be a part of this prospectus supplement:

- our Annual Report on Form 10-K for the year ended December 31, 2016, filed on April 13, 2017;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2017, filed on May 18, 2017, June 30, 2017, filed on August 22, 2017, and September 30, 2017, filed on November 20, 2017;
- our Current Reports on Form 8-K and 8-K/A filed with the SEC on January 6, 2017, January 17, 2017, January 19, 2017, January 20, 2017, February 3, 2017, February 21, 2017, February 24,

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2017, April 17, 2017, May 25, 2017, June 6, 2017, June 27, 2017, June 28, 2017, June 30, 2017, July 31, 2017, August 23, 2017, August 31, 2017, October 2, 2017, November 3, 2017, November 6, 2017, November 13, 2017, November 14, 2017 and January 31, 2018;

- our soliciting materials on Schedule 14A filed on April 20, 2017 and May 22, 2017;

- our Definitive Proxy Statements on Schedule 14A filed on May 12, 2017 and December 29, 2017;

- our Definitive Additional Materials on Schedule 14A filed on May 25, 2017 and May 26, 2017;

- our Notifications of Late Filing on Forms 12b-25 filed on August 14, 2017, August 15, 2017 and November 13, 2017; and

- the description of our common stock contained in the Registration Statement on Form 8-A filed on June 29, 2017 (File No. 001-36439), and any further amendment or report filed thereafter for the purpose of updating such description.

We also incorporate by reference all documents filed pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement and prior to the termination of this offering; provided, however, that we are not incorporating any information furnished under Item 2.02 or Item 7.01 of any current report on Form 8-K we may subsequently file.

Statements made in this prospectus supplement or the accompanying prospectus or in any document incorporated by reference in this prospectus supplement or the accompanying prospectus as to the contents of any contract or other document referred to herein or therein are not necessarily complete, and in each instance reference is made to the copy of such contract or other document filed as an exhibit to the documents incorporated by reference, each such statement being qualified in all material respects by such reference.

You may access our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to any of these reports, free of charge on the SEC's website. You may also access the documents incorporated by reference on our website at www.precipiodx.com. Other than the foregoing documents incorporated by reference, the information contained in, or that can be accessed through, our website is not part of this prospectus supplement.

In addition, we will furnish without charge to each person, including any beneficial owner, to whom a prospectus supplement is delivered, on written or oral request of such person, a copy of any or all of the documents incorporated by reference in this prospectus supplement (not including exhibits to such documents, unless such exhibits are specifically incorporated by reference in this prospectus supplement or into such documents). Such requests may be directed to Investor Relations, Precipio, Inc., 4 Science Park, New Haven, Connecticut 06511 or call (203) 787-7888.

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PROSPECTUS

Transgenomic, Inc.
\$50,000,000
Common Stock
Preferred Stock
Debt Securities
Warrants
Units

We may offer and sell up to \$50,000,000 in the aggregate of any combination of the securities identified above from time to time in one or more offerings, either individually or in combination with other securities. We may also offer common stock or preferred stock upon conversion of debt securities, common stock upon conversion of preferred stock, or common stock, preferred stock or debt securities upon the exercise of warrants.

Each time we offer and sell securities, we will provide a supplement to this prospectus that contains specific information about the offering and the amounts, prices and terms of the securities. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectuses may also add, update or change information contained in this prospectus with respect to that offering. You should carefully read this prospectus and the applicable prospectus supplement and any related free writing prospectus, as well as any documents incorporated by reference, before you invest in any of our securities.

We may offer and sell the securities described in this prospectus and any prospectus supplement to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. See the sections of this prospectus entitled “About this Prospectus” and “Plan of Distribution” for more information. No securities may be sold without delivery of this prospectus and the applicable prospectus supplement describing the method and terms of the offering of such securities.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading “Risk Factors” on page 2 of this prospectus, any applicable prospectus supplement and in any applicable free writing prospectuses, and under similar headings in the documents that are incorporated by reference into this prospectus.

Our common stock is currently listed on the NASDAQ Capital Market under the symbol “TBIO”. On February 3, 2015, the last reported sales price for our common stock was \$3.32 per share. The applicable prospectus supplement will contain information, where applicable, as to any other listing on the NASDAQ Capital Market or any securities market or other exchange of the securities, if any, covered by the applicable prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is February 13, 2015.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, utilizing a “shelf” registration process. Under this shelf registration process, we may offer and sell shares of our common stock and preferred stock, various series of debt securities, warrants to purchase any of such securities and/or units consisting of any combination of such securities, either individually or in combination with other securities, in one or more offerings, up to a total dollar amount of \$50,000,000. This prospectus provides you with a general description of the securities we may offer.

Each time we offer securities under this prospectus, we will provide a prospectus supplement that will contain more specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement and any related free writing prospectus we have authorized for use in connection with a specific offering may also add, update or change any of the information contained in this prospectus or in the documents that we have incorporated by reference into this prospectus. We urge you to read carefully this prospectus, any applicable prospectus supplement and any free writing prospectuses we have authorized for use in connection with a specific offering, together with the information incorporated herein by reference as described under the section entitled “Important Information Incorporated by Reference”, before buying any of the securities being offered.

You should rely only on the information contained in, or incorporated by reference into, this prospectus and any applicable prospectus supplement, along with the information contained in any free writing prospectuses we have authorized for use in connection with a specific offering. We have not authorized anyone to provide you with different or additional information. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

The information appearing in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “Where You Can Find More Information”.

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PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus or incorporated by reference in this prospectus, and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, any applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading “Risk Factors” contained in any applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part. Unless otherwise mentioned or unless the context requires otherwise, all references in this prospectus to “Transgenomic”, “the Company”, “we”, “us”, “our” or similar references mean Transgenomic, Inc. together with its consolidated subsidiary.

Transgenomic, Inc.

We are a global biotechnology company advancing personalized medicine in the detection and treatment of cancer and inherited diseases through our proprietary molecular technologies and clinical and research services. We have two complementary business segments:

- **Laboratory Services.** Our laboratories specialize in genetic testing for cardiology, neurology, mitochondrial disorders and oncology. Our Patient Testing laboratories located in New Haven, Connecticut and Omaha, Nebraska are certified under the Clinical Laboratory Improvement Amendment as high complexity labs and our Omaha facility is also accredited by the College of American Pathologists. Our Biomarker Identification laboratory located in Omaha, Nebraska also provides pharmacogenomics research services supporting Phase II and Phase III clinical trials conducted by pharmaceutical companies. Our laboratories employ a variety of genomic testing service technologies, including ICE COLD-PCR technology. ICE COLD-PCR is a proprietary platform technology that can be run in any laboratory with standard PCR technology and that enables detection of multiple unknown mutations from virtually any sample type, including tissue biopsies, blood, cell-free DNA and circulating tumor cells at levels greater than 1,000-fold higher than standard DNA sequencing techniques.

- **Genetic Assays and Platforms.** Our proprietary product is the WAVE® System, which has broad applicability to genetic variation detection in both molecular genetic research and molecular diagnostics. We also distribute bioinstruments produced by other manufacturers, or OEM Equipment, through our sales and distribution network. Service contracts to maintain installed systems are sold and supported by our technical support personnel. The installed WAVE base and some OEM Equipment platforms generate a demand for consumables that are required for the continued operation of the bioinstruments. We develop, manufacture and sell these consumable products. In addition, we manufacture and sell consumable products that can be used on multiple, independent platforms. These products include a range of chromatography columns.

For a complete description of our business, financial condition, results of operations and other important information, we refer you to our filings with the Securities and Exchange Commission, or the SEC, that are incorporated by reference in this prospectus, including our Annual Report on Form 10-K for the year ended December 31, 2013. For instructions on how to find copies of these documents, see “Where You Can Find More Information”.

We were incorporated in Delaware on March 6, 1997. Our principal office is located at 12325 Emmet Street, Omaha, Nebraska 68164 and our telephone number is 402-452-5400. Our website address is www.transgenomic.com.

Information on our website, or that can be accessed through our website, is not incorporated by reference into this prospectus and does not constitute part of this prospectus.

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RISK FACTORS

Investing in any securities offered pursuant to this prospectus and the applicable prospectus supplement involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described under “Risk Factors” in any applicable prospectus supplement and in our most recent Annual Report on Form 10-K, or any updates in our Quarterly Reports on Form 10-Q, together with all of the other information appearing in or incorporated by reference into this prospectus and any applicable prospectus supplement, before deciding whether to purchase any of the securities being offered. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

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DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference into this prospectus may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, about the Company and its subsidiaries. These forward-looking statements are intended to be covered by the safe harbor for forward-looking statements provided by the Private Securities Litigation Reform Act of 1995. Forward-looking statements are not statements of historical fact, and can be identified by the use of forward-looking terminology such as “believes”, “expects”, “may”, “will”, “could”, “should”, “projects”, “plans”, “goal”, “targets”, “potential”, “estimates”, “pro forma”, “seek”, “anticipates” or the negative thereof or comparable terminology. Forward-looking statements include discussions of strategy, financial projections, guidance and estimates (including their underlying assumptions), statements regarding plans, objectives, expectations or consequences of various transactions, and statements about the future performance, operations, products and services of the Company and its subsidiaries. We caution our stockholders and other readers not to place undue reliance on such statements.

You should read this prospectus and the documents incorporated by reference completely and with the understanding that our actual future results may be materially different from what we currently expect. Our business and operations are and will be subject to a variety of risks, uncertainties and other factors. Consequently, actual results and experience may materially differ from those contained in any forward-looking statements. Such risks, uncertainties and other factors that could cause actual results and experience to differ from those projected include, but are not limited to, the risk factors set forth in Part I — Item 1A, “Risk Factors”, in our Annual Report on Form 10-K for the year ended December 31, 2013, as filed with the SEC on March 27, 2014, and elsewhere in the documents incorporated by reference into this prospectus.

You should assume that the information appearing in this prospectus, any accompanying prospectus supplement, any related free writing prospectus and any document incorporated herein by reference is accurate as of its date only. Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. All written or oral forward-looking statements attributable to us or any person acting on our behalf made after the date of this prospectus are expressly qualified in their entirety by the risk factors and cautionary statements contained in and incorporated by reference into this prospectus. Unless legally required, we do not undertake any obligation to release publicly any revisions to such forward-looking statements to reflect events or circumstances after the date of this prospectus or to reflect the occurrence of unanticipated events.

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USE OF PROCEEDS

Except as described in any applicable prospectus supplement or in any free writing prospectuses we have authorized for use in connection with a specific offering, we currently intend to use the net proceeds from this offering, if any, for working capital and general corporate purposes, which may include, without limitation, supporting asset growth and engaging in acquisitions or other business combinations. We also may use a portion of the proceeds to repay debt. The amounts and timing of our use of the net proceeds from this offering will depend on a number of factors, such as the timing and progress of our research and development efforts, the timing and progress of any partnering and commercialization efforts, technological advances and the competitive environment for our products. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Accordingly, our management will have broad discretion in the timing and application of these proceeds. Pending application of the net proceeds as described above, we intend to temporarily invest the proceeds in short-term, interest-bearing instruments.

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RATIO OF EARNINGS TO FIXED CHARGES AND PREFERRED SHARE DIVIDENDS

The following table sets forth the historical ratios of earnings to fixed charges and preferred share dividends for Transgenomic and its subsidiary for the periods indicated.

| | Year Ended December 31, | | | | | Nine Months Ended September 30, 2014 |
|---|-------------------------|------|------|------|------|---|
| | 2009 | 2010 | 2011 | 2012 | 2013 | |
| Ratio of earnings (loss) to fixed charges(1) | — | — | — | — | — | — |
| Ratio of earnings (loss) to combined fixed charges and preferred share dividends(2) | — | — | — | — | — | — |

(1)

We did not record earnings for any of the years ended December 31, 2009, 2010, 2011, 2012 or 2013 or the nine months ended September 30, 2014. Accordingly, our earnings were insufficient to cover fixed charges for such periods and we are unable to disclose a ratio of earnings to fixed charges for such periods. The dollar amount of the deficiency in earnings available for fixed charges for the years ended December 31, 2009, 2010, 2011, 2012 and 2013 and the nine months ended September 30, 2014 was approximately \$1.878 million, \$2.984 million, \$9.737 million, \$8.181 million, \$16.041 million and \$7.678 million.

(2)

We did not record earnings for any of the years ended December 31, 2009, 2010, 2011, 2012 or 2013 or the nine months ended September 30, 2014. Accordingly, our earnings were insufficient to cover combined fixed charges and preference dividends for such periods and we are unable to disclose a ratio of earnings to combined fixed charges and preference dividends for such periods. The dollar amount of the deficiency in earnings available for combined fixed charges and preference dividends for the years ended December 31, 2009, 2010, 2011, 2012 and 2013 and the nine months ended September 30, 2014 was approximately \$1.878 million, \$2.984 million, \$10.747 million, \$8.841 million, \$16.767 million and \$8.517 million.

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DESCRIPTION OF CAPITAL STOCK

General Matters

Under our Third Amended and Restated Certificate of Incorporation, as amended from time to time, or the Certificate of Incorporation, we are authorized to issue up to 150,000,000 shares of common stock, \$0.01 par value per share, or the Common Stock, from time to time, as provided in a resolution or resolutions adopted by our Board of Directors.

Common Stock

As of January 31, 2015, 8,283,179 shares of Common Stock were issued and outstanding, held by approximately 82 stockholders of record, not including beneficial holders whose shares are held in names other than their own.

Dividends, Voting Rights and Liquidation

Holders of Common Stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders and do not have cumulative voting rights. Holders of Common Stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by our Board of Directors out of funds legally available for dividend payments. All outstanding shares of Common Stock are fully paid and non-assessable. The holders of Common Stock have no preferences or rights of conversion, exchange, pre-emption or other subscription rights. There are no redemption or sinking fund provisions applicable to the Common Stock. In the event of any liquidation, dissolution or winding-up of our affairs, holders of Common Stock will be entitled to share ratably in our assets that are remaining after payment or provision for payment of all of our debts and obligations. The rights, preferences and privileges of the Common Stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock currently outstanding or which we may designate and issue in the future.

Preferred Stock

General Matters

Under the Certificate of Incorporation, we have the authority to issue up to 15,000,000 shares of preferred stock, \$0.01 par value per share, or the "Preferred Stock", issuable in specified series and having specified voting, dividend, conversion, liquidation and other rights and preferences as our Board of Directors may determine, subject to limitations set forth in the Certificate of Incorporation. The Preferred Stock may be issued for any lawful corporate purpose without further action by our stockholders. The issuance of any Preferred Stock having conversion rights might have the effect of diluting the interests of our other stockholders. In addition, shares of Preferred Stock could be issued with rights, privileges and preferences which would deter a tender or exchange offer or discourage the acquisition of control of the Company.

Of the number of shares of Preferred Stock authorized by our Certificate of Incorporation, as of January 31, 2015 (i) 3,879,307 shares had been designated Series A Convertible Preferred Stock with such rights, privileges and preferences as set forth in the Certificate of Amendment of Certificate of Designation of Series A Convertible Preferred Stock filed with the Secretary of State of the State of Delaware on March 5, 2014, or the Series A Certificate of Designation, and (ii) 1,443,297 shares had been designated Series B Convertible Preferred Stock with such rights, privileges and preferences as set forth in the Certificate of Designation of Series B Convertible Preferred Stock filed with the Secretary of State of the State of Delaware on March 5, 2014, or the Series B Certificate of Designation. As of January 31, 2015, 2,586,205 shares of the Series A Convertible Preferred Stock, or the Series A Preferred, were issued and outstanding, and 1,443,297 shares of the Series B Convertible Preferred Stock, or the Series B Preferred, were issued and outstanding. The Series A Preferred and the Series B Preferred are sometimes referred to in this prospectus, together, as the Preferred Shares.

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Dividends, Voting Rights and Liquidation

Each of the Series A Certificate of Designation and the Series B Certificate of Designation provides that the holders of Preferred Shares shall be entitled, as a separate voting group, at each annual or special election of directors, to elect two directors of the Company.

Certain rights of the holders of the Series B Preferred are senior to the rights of the holders of the Series A Preferred and to the rights of the holders of our Common Stock. The Series B Preferred has a liquidation preference equal to its original price per share, plus any accrued and unpaid dividends thereon. The Series B Preferred accrues cumulative dividends at the rate of 6.0% of the original price per share per annum. Additionally, the Series B Certificate of Designation also contains an optional redemption provision whereby the holders of a majority of the then issued and outstanding Series B Preferred, voting together as a separate class, may, after March 5, 2019, the fifth anniversary of the closing of the private placement in which the shares of Series B Preferred were issued, require the Company to redeem all of the then issued and outstanding shares of Series B Preferred at the initial price per share of the Series B Preferred, as adjusted for any stock dividends, combinations or splits, plus all accrued but unpaid dividends.

Certain rights of the holders of the Series A Preferred are senior to the rights of the holders of our Common Stock. Subject to the liquidation preference of the Series B Preferred, the Series A Preferred has a liquidation preference equal to its original price per share, plus any accrued and unpaid dividends thereon. After the payment of dividends to the holders of Series B Preferred, the Series A Preferred accrues cumulative dividends at the rate of 10.0% of the original price per share per annum.

All outstanding shares of Series B Preferred will be automatically converted into Common Stock, at an initial conversion rate of 1:1, and all outstanding shares of Series A Preferred will be automatically converted into Common Stock, at an initial conversion rate of 4:1, at the election of the holders of a majority of the then-outstanding Preferred Shares, voting together as a single class on an as-converted to Common Stock basis. The initial conversion rate for each of the Series A Preferred and the Series B Preferred is subject to adjustment in the event of certain stock splits, stock dividends, mergers, reorganizations and reclassifications. After giving effect to the 1-for-12 reverse split of the Common Stock effected in January 2014, the conversion rate for the Series A Preferred was adjusted to 1:3.

Generally, the holders of the Preferred Shares are entitled to vote together as a single group with the holders of Common Stock on an as-converted to Common Stock basis. However, each of the Series A Certificate of Designation and the Series B Certificate of Designation provides that we will not perform the following activities, subject to certain exceptions, without the affirmative vote of the holders of at least two-thirds of the outstanding Preferred Shares, voting together as a single class on an as-converted to Common Stock basis:

- authorize, create or issue any other class or series of capital stock having rights, preferences or privileges senior to or in parity with the Preferred Shares;
- alter or change the rights, preferences or privileges of the Preferred Shares or increase or decrease the authorized number of Preferred Shares, Series A Preferred or Series B Preferred;
- authorize or declare any dividends on the shares of Common Stock or any other shares of capital stock other than the Preferred Shares, other than dividends payable solely in shares of Common Stock;
- authorize any offering of equity securities of the Company representing (on a pro forma basis after giving effect to the issuance of such equity securities) the right to receive not less than 10% of any amounts or funds that would, as of immediately following such issuance, be legally available for distribution in connection with a liquidation event;
- redeem any shares of capital stock (other than pursuant to employee agreements or the terms of the capital stock);

- increase or decrease the authorized number of members of the Board of Directors;
- enter into any binding agreement with any director, employee or any affiliate of the Company, excluding employment-related and equity award agreements;

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- materially change the nature of the Company's business, enter into new lines of business or exit the current line of business or invest in any person or entity engaged in a business that is not substantially similar to the Company's business, or change the location of any permanent location of any part of the Company's business;
- make any loans or advances, individually or in the aggregate in excess of \$1,000,000, to, or own any securities of, any subsidiary or other corporation or other entity unless it is wholly owned by the Company;
- make any loan or advance to any natural person, including, without limitation, any employee or director of the Company, except advances and similar expenditures in the ordinary course of business;
- guarantee, directly or indirectly, any indebtedness, except for trade accounts of the Company arising in the ordinary course of business;
- sell or otherwise dispose of any assets of the Company with a value, individually or collectively, in excess of \$500,000, other than in the ordinary course of business;
- liquidate, dissolve or wind-up the business and affairs of the Company or effect a change in control or any other liquidation event;
- incur any indebtedness in excess of \$1,000,000 in the aggregate, other than trade credit incurred in the ordinary course of business;
- expend funds in excess of \$500,000 in the aggregate per year for capital improvements, other than any such expenditure that is consistent with a budget approved by the Board of Directors, including the directors elected by the holders of Preferred Shares;
- obligate the Company to make aggregate annual payments in excess of \$500,000 or sell, transfer, pledge or license any material technology or intellectual property of the Company, other than a non-exclusive license in the ordinary course of business; or
- increase the number of shares reserved and issuable under any of the Company's equity or option incentive compensation plans.

Anti-Takeover Effects Under Section 203 of the General Corporation Law of the State of Delaware
We are subject to Section 203 of the General Corporation Law of the State of Delaware, or the DGCL, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

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before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or an exchange offer; or

- on or after such date, the business combination is approved by the board of directors and authorized at an annual or a special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 $\frac{2}{3}$ % of the outstanding voting stock that is not owned by the interested stockholder.

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In general, Section 203 of the DGCL defines “business combination” to include the following:

- any merger or consolidation involving the corporation or any direct or indirect majority owned subsidiary of the corporation and the interested stockholder or any other corporation, partnership, unincorporated association, or other entity if the merger or consolidation is caused by the interested stockholder and as a result of such merger or consolidation the transaction is not excepted as described above;
- any sale, transfer, pledge, or other disposition (in one transaction or a series) of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges, or other financial benefits by or through the corporation.

In general, Section 203 of the DGCL defines an “interested stockholder” as an entity or a person who, together with the person’s affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

A Delaware corporation may “opt out” of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a stockholders’ amendment approved by at least a majority of the outstanding voting shares. We have not opted out of these provisions. As a result, mergers or other takeover or change in control attempts of us may be discouraged or prevented.

Anti-Takeover Effects Under Certain Provisions of our Certificate of Incorporation and Bylaws

Our Certificate of Incorporation and our Amended and Restated Bylaws, or the Bylaws, include a number of provisions that may have the effect of deterring hostile takeovers or delaying or preventing changes in control of the management of the Company.

First, our Certificate of Incorporation provides that all stockholder actions must be effected at a duly called meeting of holders and not by a consent in writing.

Second, our Bylaws provide that special meetings of the holders may be called only by the chairman of our Board of Directors, the Chief Executive Officer or our Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors.

Third, our Certificate of Incorporation provides that our Board of Directors can issue up to 15,000,000 shares of Preferred Stock without further action by our stockholders, as described under “— Preferred Stock” above.

Fourth, our Certificate of Incorporation and Bylaws provide for a classified Board of Directors in which approximately one-third of the directors are elected each year. Consequently, any potential acquirer would need to successfully complete two proxy contests in order to take control of our Board of Directors. As a result of the provisions of the Certificate of Incorporation and Delaware law, stockholders will not be able to cumulate votes for directors.

Fifth, our Certificate of Incorporation prohibits a business combination with an interested stockholder without the approval of the holders of 75% of all voting shares and the vote of a majority of the voting shares held by disinterested stockholders, unless it has been approved by a majority of the disinterested directors.

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Finally, our Bylaws establish procedures, including advance notice procedures, with regard to the nomination of candidates for election as directors and stockholder proposals. These provisions of our Certificate of Incorporation and Bylaws could discourage potential acquisition proposals and could delay or prevent a change in control of the management of our company.

Listing

Our common stock is listed on the NASDAQ Capital Market under the symbol “TBIO”.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Wells Fargo Shareowner Services. Its address is 1110 Centre Pointe Curve, Suite 101, Mendota Heights, MN 55120 and its telephone number is 1-855-217-6361.

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DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any debt securities that we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities offered under a prospectus supplement may differ from the terms described below. Unless the context requires otherwise, whenever we refer to the indenture, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue the debt securities under the indenture that we will enter into with the trustee named in the indenture. The indenture will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indenture is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses we authorize for use in connection with a specific offering of debt securities, as well as the complete indenture that contains the terms of the debt securities.

General Matters

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and in any currency or currency unit that we may designate. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations or financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as “discount securities”, which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with “original issue discount”, or OID, for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in any applicable prospectus supplement.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;

- any limit upon the aggregate principal amount that may be issued;

- the maturity date or dates;

- the form of the debt securities of the series;

- the applicability of any guarantees;

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whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;

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whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;

•

if the price (expressed as a percentage of the aggregate principal amount thereof) at which the debt securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such debt securities that is convertible into another security or the method by which any such portion shall be determined;

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- the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date or dates, if any, on which, and the price or prices at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- any and all terms, if applicable, relating to any auction or remarketing of the debt securities of that series and any security for our obligations with respect to such debt securities and any other terms which may be advisable in connection with the marketing of debt securities of that series;
- whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities, and the depositary for such global security or securities;
- if applicable, the provisions relating to conversion or exchange of any debt securities of the series and the terms and conditions upon which such debt securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at our option or at the holders' option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange;
- if other than the full principal amount thereof, the portion of the principal amount of debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;
- additions to or changes in the covenants applicable to the particular debt securities being issued, including, among others, the consolidation, merger or sale covenant;
- additions to or changes in the events of default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium, if any, and interest, if any, with respect to such securities to be due

and payable;

- additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;
- additions to or changes in the provisions relating to satisfaction and discharge of the indenture;
- additions to or changes in the provisions relating to the modification of the indenture both with and without the consent of the holders of the debt securities issued under the indenture;
- the currency of payment of the debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;
- whether interest will be payable in cash or additional debt securities at our or the holders' option and the terms and conditions upon which the election may be made;
- the terms and conditions, if any, upon which we will pay amounts in addition to the stated interest, premium, if any, and principal amounts of the debt securities of the series to any holder that is not a "United States person" for federal tax purposes;

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- any restrictions on transfer, sale or assignment of the debt securities of the series; and

- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our Common Stock or our other securities. We will include provisions as to settlement upon conversion or exchange and whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our Common Stock or our other securities that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indenture will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of our assets as an entirety or substantially as an entirety. However, any successor to or acquirer of such assets (other than a subsidiary of ours) must assume all of our obligations under the indenture or the debt securities, as appropriate.

Events of Default under the Indenture

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the following are events of default under the indenture with respect to any series of debt securities that we may issue:

- if we fail to pay any installment of interest on any series of debt securities, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by us in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of interest for this purpose;

- if we fail to pay the principal of, or premium, if any, on any series of debt securities as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to such series; provided, however, that a valid extension of the maturity of such debt securities in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of principal or premium, if any;

- if we fail to observe or perform any other covenant or agreement contained in the debt securities or the indenture, other than a covenant specifically relating to another series of debt securities, and our failure continues for a period of 90 days after we receive written notice of such failure, requiring the same to be remedied and stating that such is a notice of default thereunder, from the trustee or holders of at least 25% of the aggregate principal amount of the outstanding debt securities of the applicable series; and

- if specified events of bankruptcy, insolvency or reorganization occur.

If an event of default with respect to debt securities of any series occurs and is continuing, other than certain specified events of bankruptcy, insolvency or reorganization, the trustee or the holders of at least 25% of the aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal, premium, if any, and accrued interest, if any, of such series of debt

securities immediately due and payable. If certain specified events of bankruptcy, insolvency or reorganization occur with respect to us, the principal amount and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

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The holders of a majority of the principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indenture, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity. The holders of a majority of the principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will have the right to institute a proceeding under the indenture or to appoint a receiver or trustee, or to seek other remedies, only if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% of the aggregate principal amount of the outstanding debt securities of that series have made a written request;
- such holders have offered to the trustee indemnity satisfactory to it against the costs, expenses and liabilities to be incurred by the trustee in compliance with the request; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority of the aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal of, or the premium, if any, or interest on, the debt securities.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indenture.

Modification of Indenture; Waiver

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may change an indenture without the consent of any holders with respect to specific matters, including, but not limited to, the following:

- to cure any ambiguity, defect or inconsistency in the indenture or in the debt securities of any series;
- to comply with the provisions described above under “— Consolidation, Merger or Sale”;

- to provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- to add to our covenants, restrictions, conditions or provisions such new covenants, restrictions, conditions or provisions for the benefit of the holders of all or any series of debt securities, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred upon us in the indenture;

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- to add to, delete from or revise the conditions, limitations and restrictions on the authorized amount, terms or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;

- to make any change that does not adversely affect the interests of any holder of debt securities of any series in any material respect;

- to provide for the issuance of, and to establish the form and terms and conditions of, the debt securities of any series as provided above under “— General Matters”, to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;

- to evidence and provide for the acceptance of appointment under any indenture by a successor trustee; or

- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act.

In addition, under the indenture, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority of the aggregate principal amount of the outstanding debt securities of each series that is affected. However, unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of any debt securities of any series;

- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any series of debt securities; or

- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

The indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including, but not limited to, the following obligations to:

- provide for payment;

- register the transfer or exchange of debt securities of the series;

- replace stolen, lost or mutilated debt securities of the series;

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pay principal of and premium and interest on any debt securities of the series;

- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, and any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

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Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we provide otherwise in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indenture provides that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, known as DTC, or another depository named by us and identified in the applicable prospectus supplement with respect to that series. To the extent the debt securities of a series are issued in global form and as book-entry, a description of terms relating to any book-entry securities will be set forth in the applicable prospectus supplement. At the option of the holder, subject to the terms of the indenture and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indenture and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will impose no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the date of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the date of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except for the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the trustee is under no obligation to exercise any of the powers given to it by the indenture at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that, unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check that we will mail to the holder or by wire

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transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of, or any premium or interest on, any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indenture and the debt securities, and any claim, controversy or dispute arising under or related to the indenture or the debt securities, will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Unsecured Convertible Promissory Notes

Pursuant to the terms of an Unsecured Convertible Promissory Note Purchase Agreement, or the Note Purchase Agreement, dated December 31, 2014, by and among the Company and certain accredited investors, the Company issued and sold, in a private placement, unsecured convertible promissory notes, or the Notes, in the aggregate principal amount of \$1,675,000. In accordance with the terms of the Notes, the outstanding principal and unpaid interest accrued under each Note is convertible into shares of Common Stock as follows: (i) commencing upon the date of issuance of the Note (but no earlier than January 1, 2015), the investor holding such Note is entitled to convert, on a one-time basis, up to 50% of the outstanding principal and unpaid interest accrued under the Note, into shares of Common Stock at a conversion price equal to the lesser of (a) the average closing price of the Common Stock on the principal securities exchange or securities market on which the Common Stock is then traded, or the Market, for the 20 consecutive trading days immediately preceding the date of conversion, and (b) \$2.20 (subject to adjustment for stock splits, stock dividends, other distributions, recapitalizations and the like); and (ii) commencing February 15, 2015, the investor holding such Note is entitled to convert, on a one-time basis, any or all of the remaining outstanding principal and unpaid interest accrued under the Note, into shares of Common Stock at a conversion price equal to 85% of the average closing price of the Common Stock on the Market for the 15 consecutive trading days immediately preceding the date of conversion.

Pursuant to the terms of the Note Purchase Agreement, the Company is obligated to use its best efforts to file with the SEC by January 31, 2016 a registration statement to register for resale all of the shares of Common Stock issued on or prior to November 30, 2015 pursuant to the conversion of any portion of the Notes, or the Initial Registration Statement, and to use its commercially reasonable efforts to have the Initial Registration Statement declared effective by the SEC by March 31, 2016. In addition, the Company is obligated to use its best efforts to file with the SEC by January 31, 2017 an additional registration statement to register for resale all of the shares of Common Stock issued pursuant to the conversion of any portion of the Notes that have not previously been registered for resale, or the Additional Registration Statement, and to use its commercially reasonable efforts to have the Additional Registration Statement declared effective by the SEC by March 31, 2017. Under the Note Purchase Agreement, the Company may be required to effect one or more other registrations to register for resale the shares of Common Stock issued or issuable under the Notes in connection with certain “piggy-back” registration rights granted to the investors in the private placement.

The Company sold the Notes to “accredited investors”, as that term is defined in the Securities Act and in reliance on the exemption from registration afforded by Section 4(2) of the Securities Act and Rule 506 of Regulation D promulgated under the Securities Act and corresponding provisions of state securities or “blue sky” laws. Accordingly, the Notes and the shares of Common Stock issued or issuable under the Notes have not been registered under the Securities Act and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the Securities Act and any applicable state securities laws.

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Senior Debt

On March 13, 2013, the Company entered into a Loan and Security Agreement, or the Loan Agreement, with Third Security, LLC and its affiliates, or the Lenders, for a revolving line of credit, or the Revolving Line, and a term loan, or the Term Loan. The Loan Agreement, as amended to date, is referred to herein as the Amended Loan Agreement.

Revolving Line

The Company may borrow up to \$3.0 million under the Revolving Line. Pursuant to the terms of the Loan Agreement, amounts advanced under the Revolving Line bear interest at an annual rate equal to the greater of (a) 6.25% or (b) the Wall Street Journal prime rate plus 3.0%. The current interest rate is 6.25% under the Amended Loan Agreement.

Interest is payable on a monthly basis, with the balance payable at the maturity of the Revolving Line. In accordance with the terms of the Amended Loan Agreement, the Company paid the Lenders an upfront fee of \$20,000, and are obligated to pay the Lenders an additional commitment fee of \$20,000 on each one-year anniversary of March 13, 2013 during the term of the Revolving Line. In addition, a fee of 0.5% per annum is payable quarterly on the unused portion of the Revolving Line. The Revolving Line matures on September 1, 2016.

Term Loan

The Company received \$4.0 million under the Term Loan on March 13, 2013. Interest under the Term Loan accrues at the annual rate of one month LIBOR plus 6.1%, subject to a LIBOR floor of 3%. The Company was required to make interest-only payments under the Term Loan through December 31, 2013, principal and interest payments on a monthly basis in each of January and February 2014 using a straight-line amortization rate, and principal and interest payments on a monthly basis beginning on April 1, 2015 through maturity using a straight-line amortization rate.

The Company paid the Lenders an upfront fee of \$40,000 for the Term Loan, and will pay the Lenders an additional final payment of \$120,000 at maturity or prepayment of the Term Loan. In addition, if the Company repays the Term Loan prior to maturity, it will pay the Lenders a prepayment penalty of 2.5% of the total outstanding balance under the Term Loan if the prepayment occurs prior to March 13, 2015, and 1.0% of the total outstanding balance under the Term Loan if the prepayment occurs thereafter. The Term Loan matures on September 1, 2016.

Additional Terms

The Amended Loan Agreement contains affirmative and negative covenants reasonably customary for similar credit facilities. Under the Term Loan, the Company is required to maintain a minimum liquidity ratio and achieve a minimum amount of revenue, and the Company also agreed not to (i) pledge or otherwise encumber its assets other than to the Lenders, (ii) enter into additional borrowings or guarantees, (iii) repurchase its capital stock, or (iv) enter into certain mergers or acquisitions without the Lenders' consent. Additionally, the Amended Loan Agreement contains a subjective acceleration clause at the discretion of the Lenders.

To secure the repayment of any amounts borrowed under the Revolving Line and the Term Loan, the Company granted the Lenders a security interest in all of the Company's assets. The occurrence of an event of default under the Amended Loan Agreement could result in the acceleration of the Company's obligations under the Amended Loan Agreement and would increase the applicable interest rate under the Revolving Line or the Term Loan (or both) by 5.0%, and permit the Lenders to exercise remedies with respect to the collateral under the Amended Loan Agreement.

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DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses we have authorized for use in connection with a specific offering, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which may consist of warrants to purchase Common Stock, Preferred Stock or debt securities and may be issued in one or more series.

Warrants may be issued independently or together with Common Stock, Preferred Stock or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus we authorize for use in connection with the specific offering. The terms of any warrants offered under a prospectus supplement may differ from the terms described below.

We have filed forms of the warrant agreements as exhibits to the registration statement of which this prospectus is a part. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, if any, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses we have authorized for use in connection with a specific offering, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General Matters

We will describe in the applicable prospectus supplement the terms relating to a series of warrants being offered, including:

- the title of such securities;
- the offering price or prices and aggregate number of warrants offered;
- the currency or currencies for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at which, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
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in the case of warrants to purchase Common Stock or Preferred Stock, the number of shares of Common Stock or Preferred Stock, as the case may be, purchasable upon the exercise of one warrant and the price at which, and the currency in which, these shares may be purchased upon such exercise;

- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- the terms of any rights to force the exercise of the warrants;

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- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of any material or special United States federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase Common Stock or Preferred Stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent in connection with the exercise of the warrant.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Governing Law

Unless we provide otherwise in the applicable prospectus supplement, the warrants and warrant agreements, and any claim, controversy or dispute arising under or related to the warrants or warrant agreements, will be governed by and construed in accordance with the laws of the State of New York.

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Enforceability of Rights by Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

Outstanding Warrants

As of January 31, 2015, warrants to purchase 2,376,059 shares of Common Stock with an average exercise price of \$9.24 per share were outstanding, and warrants to purchase 1,293,102 shares of Series A Preferred with an average exercise price of \$2.32 per share were outstanding. Except for certain warrants to purchase 374,618 shares of Common Stock, all of the outstanding warrants are currently exercisable, and all outstanding warrants contain provisions for the adjustment of the exercise price in the event of stock dividends, stock splits, reorganizations, reclassifications or mergers. In addition, certain of the warrants contain a “cashless exercise” feature that allows the holders thereof to exercise the warrants without a cash payment to us under certain circumstances.

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DESCRIPTION OF UNITS

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may evidence each series of units by unit certificates that we will issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

The following description, together with the additional information included in any applicable prospectus supplement, summarizes the general features of the units that we may offer under this prospectus. You should read any prospectus supplement and any free writing prospectus we authorize for use in connection with a specific offering of units, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms and provisions and we will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from another report that we file with the SEC, the form of each unit agreement relating to units offered under this prospectus.

If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable:

- the title of the series of units;

- identification and description of the separate constituent securities comprising the units;

- the price or prices at which the units will be issued;

- the date, if any, on and after which the constituent securities comprising the units will be separately transferable;

- a discussion of certain U.S. federal income tax considerations applicable to the units; and

- any other terms of the units and their constituent securities.

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LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee or depository maintain for this purpose as the “holders” of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as “indirect holders” of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

Book-Entry Holders

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depository on behalf of other financial institutions that participate in the depository’s book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Global securities will be registered in the name of the depository or its participants. Consequently, for global securities, we will recognize only the depository as the holder of the securities, and we will make all payments on the securities to the depository. The depository passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depository and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a global security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depository’s book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not legal holders, of the securities.

Street Name Holders

We may terminate a global security in certain situations, as described under “— Special Situations When a Global Security Will Be Terminated”, or issue securities that are not issued in global form. In these cases, investors may choose to hold their securities in their own names or in “street name”. Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we or any applicable trustee or depository will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we or any such trustee or depository will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal Holders

Our obligations, as well as the obligations of any applicable trustee or third party employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the legal holder, we have no further responsibility for the payment or notice even if that legal holder is required, under agreements with its participants or customers or by law, to pass the payment or notice along to the indirect holders but does not

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do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of an indenture, or for other purposes. In such an event, we would seek approval only from the legal holders, and not the indirect holders, of the securities. Whether and how the legal holders contact the indirect holders is up to the legal holders.

Special Considerations for Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form because the securities are represented by one or more global securities or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book-entry form, how the depository's rules and procedures will affect these matters.

Global Securities

A global security is a security that represents one or any other number of individual securities held by a depository. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we issue to, deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depository. Unless we specify otherwise in the applicable prospectus supplement, The Depository Trust Company, New York, New York, known as DTC, will be the depository for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depository, its nominee or a successor depository, unless special termination situations arise. We describe those situations below under "— Special Situations When a Global Security Will Be Terminated". As a result of these arrangements, the depository, or its nominee, will be the sole registered owner and legal holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depository or with another institution that does. Thus, an investor whose security is represented by a global security will not be a legal holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued as a global security, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations for Global Securities

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

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If securities are issued only as global securities, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations described below;
- an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as described above;
- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;
- an investor may not be able to pledge his or her interest in the global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depository's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in the global security;
- we and any applicable trustee have no responsibility for any aspect of the depository's actions or for its records of ownership interests in the global security, nor will we or any applicable trustee supervise the depository in any way;
- the depository may, and we understand that DTC will, require that those who purchase and sell interests in the global security within its book-entry system use immediately available funds, and your broker or bank may require you to do the same; and
- financial institutions that participate in the depository's book-entry system, and through which an investor holds its interest in the global security, may also have their own policies affecting payments, notices and other matters relating to the securities.

There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special Situations When a Global Security Will Be Terminated

In a few special situations described below, a global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own names, so that they will be direct holders. The rights of holders and street name investors are described above.

A global security will terminate when the following special situations occur:

- if the depository notifies us that it is unwilling, unable or no longer qualified to continue as depository for that global security and we do not appoint another institution to act as depository within 90 days;
-

if we notify any applicable trustee that we wish to terminate that global security; or

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if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The applicable prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depository, and neither we nor any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

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PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, “at the market” offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute securities from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

A prospectus supplement or supplements (and any related free writing prospectus that we may have authorized for use in connection with a specific offering) will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of the underwriters, if any;
- the purchase price of the securities or other consideration therefor, and the proceeds, if any, we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents’ or underwriters’ compensation;
- any public offering price;
- any discounts or concessions allowed or re-allowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

Only underwriters named in the prospectus supplement will be underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement, other than

securities covered by any over-allotment option. Any public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

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All securities we may offer, other than Common Stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the over-allotment option or in the open market after the distribution is completed, to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

Any underwriters that are qualified market makers on the NASDAQ Capital Market may engage in passive market making transactions in the common stock on the NASDAQ Capital Market in accordance with Regulation M under the Exchange Act, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the common stock. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

In compliance with guidelines of the Financial Industry Regulatory Authority, or FINRA, the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and the applicable prospectus supplement.

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LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered by this prospectus, and any supplement thereto, will be passed upon for us by Paul Hastings LLP, Palo Alto, California.

EXPERTS

The consolidated financial statements of Transgenomic, Inc. included in Transgenomic, Inc.'s Annual Report (Form 10-K) as of December 31, 2013 and for the year then ended, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report incorporated herein by reference. Such financial statements are incorporated herein in reliance upon the report of Ernst & Young LLP pertaining to such financial statements given on the authority of such firm as experts in accounting and auditing.

The audited consolidated financial statements of Transgenomic, Inc. and subsidiary as of December 31, 2012 and December 31, 2011 included in our Annual Report on Form 10-K for the year ended December 31, 2013 incorporated by reference in this prospectus have been audited by McGladrey LLP, independent registered public accounting firm, as stated in their report dated March 14, 2013, which is incorporated by reference herein, and has been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities being offered under this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities being offered under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including Transgenomic, Inc. The SEC's Internet site can be found at <http://www.sec.gov>.

IMPORTANT INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The documents incorporated by reference into this prospectus contain important information that you should read about us.

The following documents are incorporated by reference into this prospectus:

(a)

The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2013, filed with the SEC on March 27, 2014, and Amendment No. 1 to the Annual Report on Form 10-K/A for the fiscal year ended December 31, 2013, filed with the SEC on September 5, 2014;

(b)

The Registrant's Definitive Proxy Statement on Schedule 14A filed with the SEC on April 24, 2014;

(c)

The Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, filed with the SEC on May 15, 2014;

(d)

The Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2014, filed with the SEC on August 8, 2014;

(e)

The Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, filed with the SEC on November 12, 2014;

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(f)

The Registrant's Current Reports on Form 8-K filed with the SEC on (i) January 14, 2014, (ii) January 16, 2014, (iii) January 28, 2014, (iv) March 6, 2014, (v) March 19, 2014, (vi) May 6, 2014, (vii) May 14, 2014, (viii) May 15, 2014, (ix) July 2, 2014, as accepted by the SEC at 4:25 p.m. Eastern time, (x) October 22, 2014, (xi) November 5, 2014, (xii) December 23, 2014; (xiii) January 7, 2015; (xiv) January 14, 2015 (but solely as to the matters disclosed under Item 8.01 thereunder and Exhibit 99.2 thereto), and (xv) January 20, 2015; and

(g)

The description of the Registrant's common stock set forth in the Registrant's Registration Statement on Form 8-A (File No. 001-36439), filed with the SEC on May 5, 2014, including any amendments or reports filed for the purpose of updating such description.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement, until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus and will become a part of this prospectus from the respective dates that such documents are filed with the SEC. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes hereof or of the related prospectus supplement to the extent that a statement contained herein or in any other subsequently filed document which is also incorporated or deemed to be incorporated herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

Documents incorporated by reference are available from us, without charge. You may obtain documents incorporated by reference in this prospectus by requesting them in writing or by telephone at the following address:

Transgenomic, Inc.

Attn: Investor Relations

12325 Emmet Street

Omaha, NE 68164

Phone: (402) 452-5400

Fax: (402) 452-5461

E-mail: investorrelations@transgenomic.com

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Up to \$8,000,000
Common Stock

PROSPECTUS SUPPLEMENT
February 8, 2018
