Precipio, Inc.
Form 424B3
October 01, 2018
TABLE OF CONTENTS
Filed Pursuant to Rule 424(b)(3)
Registration No. 333-227364

PROSPECTUS

Up to 7,000,000
Common Stock

This prospectus relates to the offer and sale of up to 7,000,000 shares of common stock, par value $0.01 per share of Precipio Inc., a Delaware corporation, or the Company, by Lincoln Park Capital Fund, LLC, or Lincoln Park or the Selling Stockholder.

The shares of common stock being offered by the Selling Stockholder have been or may be issued pursuant to the purchase agreement dated September 7, 2018, or the Purchase Agreement, that we entered into with Lincoln Park. See "The Lincoln Park Transaction" for a description of the Purchase Agreement and "Selling Stockholder" for additional information regarding Lincoln Park. The prices at which Lincoln Park may sell the shares of common stock will be determined by the prevailing market price for the shares of common stock or in negotiated transactions.

We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of the shares of common stock by the Selling Stockholder.

The Selling Stockholder may sell the shares of common stock described in this prospectus in a number of different ways and at varying prices. See "Plan of Distribution" for more information about how the Selling Stockholder may sell the shares of common stock being registered pursuant to this prospectus. The Selling Stockholder is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended.

We will pay the expenses incurred in registering the shares of common stock, including legal and accounting fees. See "Plan of Distribution".

Our common stock is listed on the NASDAQ Capital Market under the symbol "PRPO." On September 27, 2018, the last reported sale price of our common stock on the NASDAQ Capital Market was $0.40 per share.

Investing in our common stock involves a high degree of risk. See "Risk Factors" in this prospectus to read about the factors you should consider before buying shares of our common stock.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

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 September 28, 2018

TABLE OF CONTENTS

TABLE OF CONTENTS

	Page
Prospectus Summary	1
The Offering	4
Risk Factors	7
Cautionary Note Regarding Forward-Looking Statements	23
Use of Proceeds	25
Selling Stockholder	26
Price Range of Common Stock	28
Capitalization	29
Dilution	31
Dividend Policy	32
Description of Capital Stock	33
Plan for Distribution	46
Legal Matters	48
Experts	48
Where You Can Find More Information	48
Market and Industry Data and Forecasts	48
Incorporation of Certain Information by Reference	49

You should rely only on the information contained in this prospectus or in any free writing prospectus we file with the Securities and Exchange Commission. We have not authorized anyone to provide you with information different from that contained in this prospectus or any free writing prospectus. We take no responsibility for, and can provide no assurance, as to the reliability of any other information that others may give you. We are offering to sell and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, or other earlier date stated in this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since such date.

For investors outside of the United States: neither we nor Lincoln Park have not done anything that would permit this offering outside the United States or to permit the possession or distribution of this prospectus outside the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

TABLE OF CONTENTS

PROSPECTUS SUMMARY

This summary does not contain all of the information you should consider before buying shares of our common stock. You should read the entire prospectus carefully, especially the "Risk Factors" and on our Quarterly report on form 10-Q for the second quarter ended June 30, 2018, filed with the SEC on August 16, 2018 and our financial statements and the related notes our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on April 13, 2018, before deciding to invest in shares of our common stock.

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.

-

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

1

TABLE OF CONTENTS

- 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 only 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.

Risks Associated with Our Business

Our ability to implement our business strategy is subject to numerous risks that you should be aware of before making an investment decision. These risks are described more fully in the section entitled "Risk Factors" immediately following this prospectus summary. These risks include, among others:

- We have a history of recurring losses and an accumulated deficit, which, among other factors, raise doubt about our ability to continue as a going concern, which in turn may hinder our ability to obtain future financing;

- As of June 30, 2018, we had a working capital deficit of $8.1 million and we are not current with our liabilities to our vendors and lenders;

- We will require additional capital in order to continue our operations, and may have difficulty raising additional capital;

-

We have a history of recurring losses; we incurred a net loss of $20.7 million for the year ended December 31, 2017 and we can provide no assurance as to our future operating results;

- Our stock price has experienced price fluctuations and may continue to do so, thereby adversely affecting our business;

- Our common stock could be further diluted as the result of the issuance of additional shares of common stock including through the Purchase Agreement with Lincoln Park, convertible securities, warrants or options.

TABLE OF CONTENTS

- We may not be able to satisfy Nasdaq listing requirements and our common stock may be delisted, which would adversely impact the price of our securities.

Recent Developments

On April 20, 2018, we entered into a securities purchase agreement or the Debt Financing Agreement, with certain investors, pursuant to which we will issue up to approximately $3.3M in 8% Senior Secured Convertible Promissory Notes with 100% common stock warrant coverage. The initial closing provided us with $1,660,000 of gross proceeds for the issuance of Notes with an aggregate principal of $1,824,176. The Note is payable by us on the earlier of (i) the one year anniversary after the initial closing date or (ii) upon the closing of a qualified offering, namely our raising gross proceeds of at least $7,000,000. The obligations under the Notes are secured, subject to certain exceptions and other permitted payments by a perfected security interest on our assets. As part of this closing, we issued to the investors 3,648,352 warrants to purchase shares of our common stock with an exercise price of $0.75. Half of these warrants have a one-year term and half have a five-year term.

On July 11, 2018, we closed on a second round of notes pursuant to the Debt Financing Agreement. This closing provided us with $348,104 of proceeds for the issuance of notes with an aggregate principal of $382,526. The notes are payable by us on the earlier of (i) the one-year anniversary after the initial closing date or (ii) upon the closing of a qualified offering, namely our raising gross proceeds of at least $7,000,000. The obligations under the notes are secured, subject to certain exceptions and other permitted payments by a perfected security interest on our assets. As part of this closing, we issued to the investors 765,052 warrants to purchase shares of our common stock with an exercise price of $0.75. Half of these warrants have a one-year term and half have a five-year term.

On August 18, 2018, we closed on a third round of notes pursuant to the Debt Financing Agreement. This closing provided us with $495,955 of proceeds for the issuance of notes with an aggregate principal of $544,999. The notes are payable by us on the earlier of (i) the one-year anniversary after the initial closing date or (ii) upon the closing of a qualified offering, our raising gross proceeds of at least $7,000,000. The obligations under the notes are secured, subject to certain exceptions and other permitted payments by a perfected security interest on our assets. As part of this closing, we issued to the investors 1,090,000 warrants to purchase shares of our common stock with an exercise price of $0.75. Half of these warrants have a one-year term and half have a five-year term.

For the notes issued under the Debt Financing Agreement, the conversion price in effect on any conversion date shall be equal to the greater of $0.50 or $0.05 above the closing bid price of our common stock on the date prior to the original issue date. In the event the notes are not paid in full prior to 180 days after the original issue date, the conversion price shall be equal to 80% of the lowest VWAP in the 10 trading days prior to the date of the notice of conversion, but in no event below the floor price of $0.30.

During July 2018, holders of Series B and Series C warrants exercised 596,300 warrants for 596,300 shares of the our common stock. We received approximately $180,000 from the warrant exercises.

Corporate 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.precipiodx.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.”

TABLE OF CONTENTS

THE OFFERING

Common stock to be offered by the Selling Stockholder hereunder

7,000,000 shares consisting of:

- 600,000 Commitment Shares issued to Lincoln Park pursuant to the terms of the Purchase Agreement; and

- 6,400,000 shares we may sell to Lincoln Park under the Purchase Agreement from time to time after the date of this prospectus;

Common stock outstanding prior to this offering

23,155,872 shares

Common stock to be outstanding after giving effect to the issuance of 7,000,000 shares under the Purchase Agreement registered hereunder

30,155,872 shares

Use of Proceeds

We will receive no proceeds from the sale of shares of common stock by Lincoln Park in this offering. We may receive up to $10,000,000 aggregate gross proceeds under the Purchase Agreement from any sales we make to Lincoln Park pursuant to the Purchase Agreement after the date of this prospectus. Any proceeds that we receive from sales to Lincoln Park under the Purchase Agreement will be used for working capital and general corporate purposes. See “Use of Proceeds.”

Risk factors

This investment involves a high degree of risk. See “Risk Factors” for a discussion of factors you should consider carefully before making an investment decision.

Symbol on The NASDAQ Capital Market

“PRPO”

Purchase Agreement with Lincoln Park

On September 7, 2018, we entered into a purchase agreement with Lincoln Park, which we refer to in this prospectus as the Purchase Agreement, pursuant to which Lincoln Park has agreed to purchase from us up to an aggregate of $10,000,000 of our common stock (subject to certain limitations) from time to time over the term of the Purchase Agreement. Also on September 7, 2018, we entered into a registration rights agreement with Lincoln Park, which we refer to in this prospectus as the Registration Rights Agreement, pursuant to which we have filed with the SEC the registration statement that includes this prospectus to register for resale under the Securities Act of 1933, as amended, or the Securities Act, the shares of common stock that have been or may be issued to Lincoln Park under the Purchase Agreement. Pursuant to the terms of the Purchase Agreement, we have already issued 600,000 shares of our common stock to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement, which we refer to in this prospectus as the Commitment Shares.

We do not have the right to commence any sales of our common stock to Lincoln Park under the Purchase Agreement until certain conditions set forth in the Purchase Agreement, all of which are outside of Lincoln Park’s control, have been satisfied, including that the SEC has declared effective the registration statement that includes this prospectus. Thereafter, we may, from time to time and at our sole discretion, on any single business day on which the closing price of our common stock is not less than $0.10 per share (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), direct Lincoln Park to purchase shares of our common stock in amounts up to 450,000 shares, which amounts may be increased to up to 550,000 shares depending on the market price of our common stock at the time of sale and subject to a

TABLE OF CONTENTS

maximum commitment by Lincoln Park of $1,000,000 per single purchase, which we refer to in this prospectus as "regular purchases", plus other "accelerated amounts" and/or "additional accelerated amounts" under certain circumstances. We will control the timing and amount of any sales of our common stock to Lincoln Park. The purchase price of the shares that may be sold to Lincoln Park in regular purchases under the Purchase Agreement will be based on the market price of our common stock preceding the time of sale as computed under the Purchase Agreement. The purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction occurring during the business days used to compute such price. We may at any time in our sole discretion terminate the Purchase Agreement without fee, penalty or cost upon one business day notice. There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement, other than a prohibition on our entering into certain types of transactions that are defined in the Purchase Agreement as "Variable Rate Transactions". Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

As of September 11, 2018, there were 23,155,872 shares of our common stock outstanding, of which 21,076,251 shares were held by non-affiliates, excluding the 600,000 commitment shares that we have already issued to Lincoln Park under the Purchase Agreement. Although the Purchase Agreement provides that we may sell up to $10,000,000 of our common stock to Lincoln Park, only 7,000,000 shares of our common stock are being offered under this prospectus, which represents: (i) 600,000 shares that we already issued to Lincoln Park as a commitment fee for making the commitment under the Purchase Agreement, and (ii) an additional 6,400,000 shares which may be issued to Lincoln Park in the future under the Purchase Agreement, if and when we sell shares to Lincoln Park under the Purchase Agreement. Depending on the market prices of our common stock at the time we elect to issue and sell shares to Lincoln Park under the Purchase Agreement, we may need to register for resale under the Securities Act additional shares of our common stock in order to receive aggregate gross proceeds equal to the $10,000,000 total commitment available to us under the Purchase Agreement. If all of the 7,000,000 shares offered by Lincoln Park under this prospectus were issued and outstanding as of the date hereof, such shares would represent approximately 23.2% of the total number of shares of our common stock outstanding and approximately 24.9% of the total number of outstanding shares held by non-affiliates, in each case as of the date hereof. If we elect to issue and sell more than the 7,000,000 shares offered under this prospectus to Lincoln Park, which we have the right, but not the obligation, to do, we must first register for resale under the Securities Act any such additional shares, which could cause additional substantial dilution to our stockholders. The number of shares ultimately offered for resale by Lincoln Park is dependent upon the number of shares we sell to Lincoln Park under the Purchase Agreement.

Under applicable rules of The NASDAQ Capital Market, in no event may we issue or sell to Lincoln Park under the Purchase Agreement more than 19.99% of the shares of our common stock outstanding immediately prior to the execution of the Purchase Agreement (which is 4,628,859 shares based on 23,155,872 shares outstanding immediately prior to the execution of the Purchase Agreement), which limitation we refer to as the Exchange Cap, unless (i) we obtain stockholder approval to issue shares of common stock in excess of the Exchange Cap or (ii) the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equals or exceeds $0.4728 (which represents the closing consolidated bid price of our common stock on September 7, 2018, plus an incremental amount to account for our issuance of the Commitment Shares to Lincoln Park), such that issuances and sales of our common stock to Lincoln Park under the Purchase Agreement would be exempt from the Exchange Cap limitation under applicable NASDAQ rules. In any event, the Purchase Agreement specifically provides that we may not issue or sell any shares of our common stock under the Purchase Agreement if such issuance or sale would breach any applicable NASDAQ rules.

The Purchase Agreement also prohibits us from directing Lincoln Park to purchase any shares of common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park and its affiliates having beneficial ownership, at any single point in time, of more than 4.99% of the then total outstanding shares of our common stock, as calculated pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and Rule 13d-3 thereunder, which limitation we refer to as the Beneficial Ownership Cap.

TABLE OF CONTENTS

Issuances of our common stock in this offering will not affect the rights or privileges of our existing stockholders, except that the economic and voting interests of each of our existing stockholders will be diluted as a result of any such issuance. Although the number of shares of common stock that our existing stockholders own will not decrease, the shares owned by our existing stockholders will represent a smaller percentage of our total outstanding shares after any such issuance to Lincoln Park.

TABLE OF CONTENTS

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below together with all of the other information contained in this prospectus, including our financial statements and the related notes on our Quarterly report on form 10Q for the second quarter ended June 30, 2018, filed with the SEC on August 16, 2018 and our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on April 13, 2018, before deciding to invest in our common stock. If any of the following risks actually occur, our business, prospects, operating results and financial condition could suffer materially, the trading price of our common stock could decline and you could lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business.

Risks Related to Our Business and Strategy

There is substantial doubt about our ability to continue as a going concern.

Our Independent Registered Public Accounting Firm has issued an opinion on our Consolidated Financial Statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on April 13, 2018, that states that the Consolidated Financial Statements were prepared assuming we will continue as a going concern. Our consolidated financial statements have been prepared using accounting principles generally accepted in the United States of America applicable for a going concern, which assume that we will realize our assets and discharge our liabilities in the ordinary course of business. We have incurred substantial operating losses and have used cash in our operating activities for the past few years. For the year ended December 31, 2017, we had a net loss of $20.7 million, negative working capital of $8.3 million and net cash used in operating activities of $6.7 million. We are not current in making payments to all lenders and vendors. Our consolidated financial statements do not include any adjustments to the amounts and classification of assets and liabilities that may be necessary should we be unable to continue as a going concern. We also cannot be certain that additional financing, if needed, will be available on acceptable terms, or at all, and our failure to raise capital when needed could limit our ability to continue our operations.

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 require significant additional financing to sustain our operations and without it we will not be able to continue operations.

At June 30, 2018, we had a working capital deficit of $8.1 million. We had an operating cash flow deficit of $3.6 million for the six months ended June 30, 2018 and for the year ended December 31, 2017, an operating cash flow deficit of $6.7 million. We do not currently have sufficient financial resources to fund our operations or those of our subsidiaries. Therefore, we need additional funds to continue these operations.

TABLE OF CONTENTS

We may direct Lincoln Park to purchase up to $10,000,000 worth of shares of our common stock under our agreement over a 24-month period generally in amounts up to 450,000 shares of our common stock, which may be increased to up to 550,000 shares of our common stock depending on the market price of our common stock at the time of sale and subject to a maximum commitment by Lincoln Park of $1,000,000 per regular purchase, on any business day on which the closing price of our common stock is not less than $0.10 per share (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement). Assuming a purchase price of $0.39 per share (the closing sale price of the common stock on September 11, 2018) and the purchase by Lincoln Park of 6,400,000 purchase shares, total gross proceeds to us would only be approximately $2.5 million.

The extent we rely on Lincoln Park as a source of funding will depend on a number of factors including, the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources. If obtaining sufficient funding from Lincoln Park were to prove unavailable or prohibitively dilutive, we will need to secure another source of funding in order to satisfy our working capital needs. Even if we sell all $10,000,000 under the Purchase Agreement to Lincoln Park, we may still need additional capital to fully implement our business, operating and development plans. Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, the consequences could be a material adverse effect on our business, operating results, financial condition and prospects.

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 or force us to restrict or cease operations.

As of June 30, 2018, we had cash of $0.1 million and our working capital was approximately negative $8.1 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 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.

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 June 30, 2018, we had a net loss of $5.3 million, negative working capital of $8.1 million and net cash used in operating activities of $3.6 million. For the six months ended June 30, 2018, 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

TABLE OF CONTENTS

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 are continuing to integrate legacy internal controls over financial reporting into our financial reporting framework. Such changes have resulted, and may continue to result in changes in our internal control over financial reporting results that materially affect our internal control over financial reporting. We continue to integrate the business processes and information systems in effect prior to the reverse merger, including internal controls. If we cannot provide reliable financial reports or detect and prevent fraud, our business and operating results could be harmed, investors could lose confidence in our reporting financial information, and the trading price of our common stock could drop significantly.

We have been, and may continue to be, subject to costly litigation.

We have been, and may continue to be, subject to legal proceedings. Due to the nature of our business and our lack of sufficient capital resources to pay our obligations on a timely basis, we may be subject to a variety of regulatory investigations, claims, lawsuits and other proceedings in the ordinary course of our business. The results of these legal proceedings cannot be predicted with certainty due to the uncertainty inherent in litigation, including the effects of discovery of new evidence or advancement of new legal theories, the difficulty of predicting decisions of judges and juries and the possibility that decisions may be reversed on appeal. Such litigation has been, and in the future, could be, costly, time-consuming and distracting to management, result in a diversion of resources and could materially adversely affect our business, financial condition and operating results.

In addition, we may settle some litigation through the issuance of equity securities which may result in significant dilution to our stockholders.

The commercial success of our product candidates will depend upon the degree of market acceptance of these products among physicians, patients, health care payors and the medical community and on our ability to successfully market our product candidates.

Our products may never gain significant acceptance in the marketplace and, therefore, may never generate substantial revenue or profits for us. Our ability to achieve commercial market acceptance for our existing and future products will depend on several factors, including:

- our ability to convince the medical community of the clinical utility of our products and their potential advantages over existing diagnostics technology;

- the willingness of physicians and patients to utilize our products; and

- the agreement by commercial third-party payors and government payors to reimburse our products, the scope and amount of which will affect patients' willingness or ability to pay for our products and will likely heavily influence physicians' decisions to recommend our products.

In addition, physicians may rely on guidelines issued by industry groups, such as the National Comprehensive Cancer Network, medical societies, such as the College of American Pathologists, or CAP, or other key oncology-related organizations before utilizing any diagnostic test. Although we have a study underway to demonstrate the clinical utility of our existing products, none of our products are, and may never be, listed in any such guidelines.

We believe that publications of scientific and medical results in peer-reviewed journals and presentations at leading conferences are critical to the broad adoption of our products. Publication in leading medical journals is subject to a peer-review process, and peer reviewers may not consider the results of studies involving our products sufficiently novel or worthy of publication. The failure to be listed in physician guidelines or to be published in peer-reviewed journals could limit the adoption of our products. Failure to achieve widespread market acceptance of our products would materially harm our business, financial condition, and results of operations.

9

TABLE OF CONTENTS

If we cannot compete successfully with our competitors, including new entrants in the market, we may be unable to increase or sustain our revenue or achieve and sustain profitability.

The medical diagnostic industry is intensely competitive and characterized by rapid technological progress. We face significant competition from competitors ranging in size from diversified global companies with significant research and development resources to small, specialized firms whose narrower product lines may allow them to be more effective in deploying related PCR technology in the genetic diagnostic industry. Our closest competitors fall largely into two groups, consisting of companies that specialize in oncology and offer directly competing services to our diagnostic services, offering their services to oncologists and pathology departments within hospitals, as well as large commercial companies that offer a wide variety of laboratory tests that range from simple chemistry tests to complex genetic testing. The technologies associated with the molecular diagnostics industry are evolving rapidly and there is intense competition within such industry. Certain molecular diagnostics companies have established technologies that may be competitive to our product candidates and any future tests that we develop. Some of these tests may use different approaches or means to obtain diagnostic results, which could be more effective or less expensive than our tests for similar indications. Moreover, these and other future competitors have or may have considerably greater resources than we do in terms of technology, sales, marketing, commercialization and capital resources. These competitors may have substantial advantages over us in terms of research and development expertise, experience in clinical studies, experience in regulatory issues, brand name exposure and expertise in sales and marketing as well as in operating central laboratory services. Many of these organizations have financial, marketing and human resources greater than ours; therefore, there can be no assurance that we can successfully compete with present or potential competitors or that such competition will not have a materially adverse effect on our business, financial position or results of operations.

In July 2017, we commenced a study to demonstrate the impact of academic pathology expertise on diagnostic accuracy. There is no assurance that this study, or other studies or trials we may conduct, will demonstrate favorable results. If the results of this study, or other studies or trials we may conduct, demonstrate unfavorable or inconclusive results, customers may choose our competitors' products over our products and our commercial opportunities may be reduced or eliminated.

We believe that many of our competitors spend significantly more on research and development-related activities than we do. Our competitors may discover new diagnostic tools or develop existing technologies to compete with our diagnostic technology. Our commercial opportunities will be reduced or eliminated if these competing products are more effective, are more convenient or are less expensive than our product candidates.

We may not be able to develop new products or enhance the capabilities of our systems to keep pace with rapidly changing technology and customer requirements, which could have a material adverse effect on our business and operating results.

Our success depends on our ability to develop new products and applications for our diagnostic technology in existing and new markets, while improving the performance and cost-effectiveness of our systems. New technologies, techniques or products could emerge that might offer better combinations of price and performance than our current or future products and systems. Existing or future markets for our products, as well as potential markets for our diagnostic product candidates, are characterized by rapid technological change and innovation. It is critical to our success that we anticipate changes in technology and customer requirements and successfully introduce new, enhanced and competitive technologies to meet our customers' and prospective customers' needs on a timely and cost-effective basis. At the same time, however, we must carefully manage the introduction of new products. If customers believe that such products will offer enhanced features or be sold for a more attractive price, they may delay purchases until such products are available. We may also have excess or obsolete inventory of older products as we transition to new products and our experience in managing product transitions is very limited. If we do not successfully innovate and introduce new technology into our product lines or effectively manage the transitions to new product offerings, our revenues and results of operations will be adversely impacted.

Competitors may respond more quickly and effectively than we do to new or changing opportunities, technologies, standards or customer requirements. We anticipate that we will face increased competition in the future as existing companies and competitors develop new or improved products and as new companies enter the market with new technologies.

10

TABLE OF CONTENTS

We currently depend on the services of pathologists at a single academic partner and the loss of the services of these pathologists would adversely impact our ability to develop, commercialize and deliver our products.

We currently depend on the services of pathologists at a single academic partner to review and render their diagnostic interpretation of our test results and to prepare the final diagnostic results that we integrate into our final report for our customers. Although we are in the process of adding new academic partners, it would be difficult to replace the services provided by the pathologists at our current partner if their services became unavailable to us for any reason prior to adding other academic partners. If this academic partner does not successfully carry out its contractual duties or obligations and meet expected deadlines; if this partner needs to be replaced, or if the quality or accuracy of the services provided by the pathologists at this partner were compromised for any reason, we would likely not be able to provide our services in a manner expected by our customers, and our financial results and the commercial prospects for our products could be harmed. The loss of the services of these pathologists would severely harm our ability to develop, commercialize and deliver our products, and our business, financial condition and operating results would be materially adversely affected.

We may experience temporary disruptions and delays in processing biological samples at our facilities.

We may experience delays in processing biological samples caused by software and other errors. Any delay in processing samples could have an adverse effect on our business, financial condition and results of operations.

We depend upon a limited number of key personnel, and if we are not able to retain them or recruit additional qualified personnel, the commercialization of our product candidates and any future tests that we develop could be delayed or negatively impacted.

Our success is largely dependent upon the continued contributions of our officers and employees. Our success also depends in part on our ability to attract and retain highly qualified scientific, commercial and administrative personnel. In order to pursue our test development and commercialization strategies, we will need to attract and hire additional personnel with specialized experience in a number of disciplines, including assay development, laboratory and clinical operations, sales and marketing, billing and reimbursement. There is intense competition for personnel in the fields in which we operate. If we are unable to attract new employees and retain existing employees, the development and commercialization of our product candidates and any future tests could be delayed or negatively impacted. If any of them becomes unable or unwilling to continue in their respective positions, and we are unable to find suitable replacements, our business and financial results could be materially negatively affected.

We will need to increase the size of our organization, and we may experience difficulties in managing growth.

We are a small company with 39 full-time employees as of June 30, 2018. Future growth will impose significant added responsibilities on members of management, including the need to identify, attract, retain, motivate and integrate highly skilled personnel. We may increase the number of employees in the future depending on the progress of our development of diagnostic technology. Our future financial performance and our ability to commercialize our product candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we must be able to:

- integrate additional management, administrative, manufacturing and regulatory personnel;

- maintain sufficient administrative, accounting and management information systems and controls; and

- hire and train additional qualified personnel.

We may not be able to accomplish these tasks, and our failure to accomplish any of them could harm our financial results.

TABLE OF CONTENTS

We currently have limited experience in marketing products. If we are unable to establish marketing and sales capabilities and retain the proper talent to execute on our sales and marketing strategy, we may not be able to generate product revenue.

We have developed limited experience in marketing our products and services. We intend to continue to develop our in-house marketing organization and sales force, which will require significant capital expenditures, management resources and time. We will have to compete with other diagnostic companies to recruit, hire, train and retain marketing and sales personnel.

If we are unable to further grow our internal sales, marketing and distribution capabilities, we may pursue collaborative arrangements regarding the sales and marketing of our product candidates or future products, however, we may not be able to establish or maintain such collaborative arrangements, or if we are able to do so, they may not have effective sales forces. Any revenue we receive will depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from product sales may be lower than if we had commercialized our product candidates ourselves. We also face competition in our search for third parties to assist us with the sales and marketing efforts of our product candidates.

We may not realize the anticipated benefits of our merger with Transgenomic, Inc.

In June 2017, we completed our merger with Transgenomic, Inc, or Transgenomic. Integrating the operations of the businesses of Precipio Diagnostics successfully or otherwise realizing any of the anticipated benefits of the merger with Precipio, including anticipated cost savings and additional revenue opportunities, involves a number of potential challenges. The failure to meet these integration challenges could seriously harm our results of operations and the market price of our common stock may decline as a result.

Realizing the benefits of the merger will depend in part on the integration of information technology, operations and personnel. These integration activities are complex and time-consuming and we may encounter unexpected difficulties or incur unexpected costs, including:

- our inability to achieve the cost savings and operating synergies anticipated in the merger, including synergies relating to increased purchasing efficiencies and a reduction in costs associated with the merger;
- diversion of management attention from ongoing business concerns to integration matters;
- difficulties in consolidating and rationalizing information technology platforms and administrative infrastructures;
- complexities associated with managing the geographic separation of the combined businesses and consolidating multiple physical locations where management may determine consolidation is desirable;
- difficulties in integrating personnel from different corporate cultures while maintaining focus on providing consistent, high quality customer service;
- challenges in demonstrating to our customers that the merger will not result in adverse changes in customer service standards or business focus; and
- possible cash flow interruption or loss of revenue as a result of change of ownership transitional matters.

We may not successfully integrate the operations of the businesses in a timely manner and may not realize the anticipated net reductions in costs and expenses and other benefits and synergies of the merger with Transgenomic to the extent, or in the timeframe, anticipated. In addition to the integration risks discussed above, our ability to realize these net reductions in costs and expenses and other benefits and synergies could be adversely impacted by practical or legal constraints on our ability to combine operations.

TABLE OF CONTENTS

Cybersecurity risks could compromise our information and expose us to liability, which may harm our ability to operate effectively and may cause our business and reputation to suffer.

Cybersecurity refers to the combination of technologies, processes and procedures established to protect information technology systems and data from unauthorized access, attack, or damage. We rely on our information systems to provide security for processing, transmission and storage of confidential information about our patients, customers and personnel, such as names, addresses and other individually identifiable information protected by HIPAA and other privacy laws. Cyber-attacks are increasingly more common, including in the health care industry. The regulatory environment surrounding information security and privacy is increasingly demanding, with the frequent imposition of new and changing requirements. Compliance with changes in privacy and information security laws and with rapidly evolving industry standards may result in our incurring significant expense due to increased investment in technology and the development of new operational processes.

We have not experienced any known attacks on our information technology systems that compromised any confidential information. We maintain our information technology systems with safeguard protection against cyber-attacks including passive intrusion protection, firewalls and virus detection software. However, these safeguards do not ensure that a significant cyber-attack could not occur. Although we have taken steps to protect the security of our information systems and the data maintained in those systems, it is possible that our safety and security measures will not prevent the systems' improper functioning or damage or the improper access or disclosure of personally identifiable information such as in the event of cyber-attacks.

Security breaches, including physical or electronic break-ins, computer viruses, attacks by hackers and similar breaches can create system disruptions or shutdowns or the unauthorized disclosure of confidential information. If personal information or protected health information is improperly accessed, tampered with or disclosed as a result of a security breach, we may incur significant costs to notify and mitigate potential harm to the affected individuals, and we may be subject to sanctions and civil or criminal penalties if we are found to be in violation of the privacy or security rules under HIPAA or other similar federal or state laws protecting confidential personal information. In addition, a security breach of our information systems could damage our reputation, subject us to liability claims or regulatory penalties for compromised personal information and could have a material adverse effect on our business, financial condition and results of operations.

Our ability to use net operating loss carryforwards to offset future taxable income for U.S. federal tax purposes is subject to limitation and risk that could further limit our ability to utilize our net operating losses.

Under U.S. federal income tax law, a corporation's ability to utilize its net operating losses, or NOLs, to offset future taxable income may be significantly limited if it experiences an "ownership change" as defined in Section 382 of the Internal Revenue Code, as amended. In general, an ownership change will occur if there is a cumulative change in a corporation's ownership by "5-percent shareholders" that exceeds 50 percentage points over a rolling three-year period. A corporation that experiences an ownership change will generally be subject to an annual limitation on the use of its pre-ownership change NOLs equal to the value of the corporation immediately before the ownership change, multiplied by the long-term tax-exempt rate (subject to certain adjustments). The annual limitation for a taxable year generally is increased by the amount of any "recognized built-in gains" for such year and the amount of any unused annual limitation in a prior year. On December 22, 2017, a law commonly known as the Tax Cuts and Jobs Act, or the TCJ Act, was enacted in the United States. Certain provisions of the TCJ Act impact the ability to utilize NOLs generated in 2018 and forward; any limitation to our annual use of NOLs could require us to pay a greater amount of U.S. federal (and in some cases, state) income taxes, which could reduce our after-tax income from operations for future taxable years and adversely impact our financial condition.

TABLE OF CONTENTS

Reimbursement and Regulatory Risks Relating to Our Business

Governmental payers and health care plans have taken steps to control costs.

Medicare, Medicaid and private insurers have increased their efforts to control the costs of health care services, including clinical testing services. They may reduce fee schedules or limit/exclude coverage for certain types of tests that we perform. Medicaid reimbursement varies by state and is subject to administrative and billing requirements and budget pressures. We expect efforts to reduce reimbursements, impose more stringent cost controls and reduce utilization of testing services will continue. These efforts, including changes in laws or regulations, may have a material adverse impact on our business.

Changes in payer mix could have a material adverse impact on our net sales and profitability.

Testing services are billed to physicians, patients, government payers such as Medicare, and insurance companies. Tests may be billed to different payers depending on a particular patient's medical insurance coverage. Government payers have increased their efforts to control the cost, utilization and delivery of health care services as well as reimbursement for laboratory testing services. Further reductions of reimbursement for Medicare and Medicaid services or changes in policy regarding coverage of tests or other requirements for payment, such as prior authorization or a physician or qualified practitioner's signature on test requisitions, may be implemented from time to time. Reimbursement for the laboratory services component of our business is also subject to statutory and regulatory reduction. Reductions in the reimbursement rates and changes in payment policies of other third party payers may occur as well. Such changes in the past have resulted in reduced payments as well as added costs and have decreased test utilization for the clinical laboratory industry by adding more complex new regulatory and administrative requirements. As a result, increases in the percentage of services billed to government payers could have an adverse impact on our net sales.

Our laboratories require ongoing CLIA certification.

The Clinical Laboratory Improvement Amendments of 1988, or CLIA, extended federal oversight to virtually all clinical laboratories by requiring that they be certified by the federal government or by a federally-approved accreditation agency. The CLIA requires that all clinical laboratories meet quality assurance, quality control and personnel standards. Laboratories must also undergo proficiency testing and are subject to inspections.

The sanctions for failure to comply with the CLIA requirements include suspension, revocation or limitation of a laboratory's CLIA certificate, which is necessary to conduct business, cancellation or suspension of the laboratory's approval to receive Medicare and/or Medicaid reimbursement, as well as significant fines and/or criminal penalties. The loss or suspension of a CLIA certification, imposition of a fine or other penalties, or future changes in the CLIA law or regulations (or interpretation of the law or regulations) could have a material adverse effect on us.

We believe that we are in compliance with all applicable laboratory requirements, but no assurances can be given that our laboratories will pass all future certification inspections.

Failure to comply with HIPAA could be costly.

The Health Insurance Portability and Accountability Act, or HIPAA, and associated regulations protect the privacy and security of certain patient health information and establish standards for electronic health care transactions in the United States. These privacy regulations establish federal standards regarding the uses and disclosures of protected health information. Our laboratories are subject to HIPAA and its associated regulations. If we fail to comply with these laws and regulations we could suffer civil and criminal penalties, fines, exclusion from participation in governmental health care programs and the loss of various licenses, certificates and authorizations necessary to operate our patient testing business. We could also incur liabilities from third party claims.

Our failure to comply with any applicable government laws and regulations or otherwise respond to claims relating to improper handling, storage or disposal of hazardous chemicals that we use may adversely affect our results of operations.

Our research and development and commercial activities involve the controlled use of hazardous materials and chemicals. We are subject to federal, state, local and international laws and regulations

TABLE OF CONTENTS

governing the use, storage, handling and disposal of hazardous materials and waste products. If we fail to comply with applicable laws or regulations, we could be required to pay penalties or be held liable for any damages that result and this liability could exceed our financial resources. We cannot be certain that accidental contamination or injury will not occur. Any such accident could damage our research and manufacturing facilities and operations, resulting in delays and increased costs.

We may become subject to the Anti-Kickback Statute, Stark Law, False Claims Act, Civil Monetary Penalties Law and may be subject to analogous provisions of applicable state laws and could face substantial penalties if we fail to comply with such laws.

There are several federal laws addressing fraud and abuse that apply to businesses that receive reimbursement from a federal health care program. There are also a number of similar state laws covering fraud and abuse with respect to, for example, private payors, self-pay and insurance. Currently, we receive a substantial percentage of our revenue from private payors and from Medicare. Accordingly, our business is subject to federal fraud and abuse laws, such as the Anti-Kickback Statute, the Stark Law, the False Claims Act, the Civil Monetary Penalties Law and other similar laws. Moreover, we are already subject to similar state laws. We believe we have operated, and intend to continue to operate, our business in compliance with these laws. However, these laws are subject to modification and changes in interpretation, and are enforced by authorities vested with broad discretion. Federal and state enforcement entities have significantly increased their scrutiny of healthcare companies and providers which has led to investigations, prosecutions, convictions and large settlements. We continually monitor developments in this area. If these laws are interpreted in a manner contrary to our interpretation or are reinterpreted or amended, or if new legislation is enacted with respect to healthcare fraud and abuse, illegal remuneration, or similar issues, we may be required to restructure our affected operations to maintain compliance with applicable law. There can be no assurances that any such restructuring will be possible or, if possible, would not have a material adverse effect on our results of operations, financial position, or cash flows.

Anti-Kickback Statute

A federal law commonly referred to as the “Anti-Kickback Statute” prohibits the knowing and willful offer, payment, solicitation or receipt of remuneration, directly or indirectly, in return for the referral of patients or arranging for the referral of patients, or in return for the recommendation, arrangement, purchase, lease or order of items or services that are covered, in whole or in part, by a federal healthcare program such as Medicare or Medicaid. The term “remuneration” has been broadly interpreted to include anything of value such as gifts, discounts, rebates, waiver of payments or providing anything at less than its fair market value. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or the PPACA, amended the intent requirement of the Anti-Kickback Statute such that a person or entity can be found guilty of violating the statute without actual knowledge of the statute or specific intent to violate the statute. Further, the PPACA now provides that claims submitted in violation of the Anti-Kickback Statute constitute false or fraudulent claims for purposes of the federal False Claims Act, or FCA, including the failure to timely return an overpayment. Many states have adopted similar prohibitions against kickbacks and other practices that are intended to influence the purchase, lease or ordering of healthcare items and services reimbursed by a governmental health program or state Medicaid program. Some of these state prohibitions apply to remuneration for referrals of healthcare items or services reimbursed by any third-party payor, including commercial payors and self-pay patients.

Stark Law

Section 1877 of the Social Security Act, or the Stark Law, prohibits a physician from referring a patient to an entity for certain “designated health services” reimbursable by Medicare if the physician (or close family members) has a financial relationship with that entity, including an ownership or investment interest, a loan or debt relationship or a compensation relationship, unless an exception to the Stark Law is fully satisfied. The designated health services covered by the law include, among others, laboratory and imaging services. Some states have self-referral laws similar to the Stark Law for Medicaid claims and commercial claims.

TABLE OF CONTENTS

Violation of the Stark Law may result in prohibition of payment for services rendered, a refund of any Medicare payments for services that resulted from an unlawful referral, $15,000 civil monetary penalties for specified infractions, criminal penalties, and potential exclusion from participation in government healthcare programs, and potential false claims liability. The repayment provisions in the Stark Law are not dependent on the parties having an improper intent; rather, the Stark Law is a strict liability statute and any violation is subject to repayment of all amounts arising out of tainted referrals. If physician self-referral laws are interpreted differently or if other legislative restrictions are issued, we could incur significant sanctions and loss of revenues, or we could have to change our arrangements and operations in a way that could have a material adverse effect on our business, prospects, damage to our reputation, results of operations and financial condition.

False Claims Act

The FCA prohibits providers from, among other things, (1) knowingly presenting or causing to be presented, claims for payments from the Medicare, Medicaid or other federal healthcare programs that are false or fraudulent; (2) knowingly making, using or causing to be made or used, a false record or statement to get a false or fraudulent claim paid or approved by the federal government; or (3) knowingly making, using or causing to be made or used, a false record or statement to avoid, decrease or conceal an obligation to pay money to the federal government. The “qui tam” or “whistleblower” provisions of the FCA allow private individuals to bring actions under the FCA on behalf of the government. These private parties are entitled to share in any amounts recovered by the government, and, as a result, the number of “whistleblower” lawsuits that have been filed against providers has increased significantly in recent years. Defendants found to be liable under the FCA may be required to pay three times the actual damages sustained by the government, plus civil penalties ranging between $5,500 and $11,000 for each separate false claim.

There are many potential bases for liability under the FCA. The government has used the FCA to prosecute Medicare and other government healthcare program fraud such as coding errors, billing for services not provided, and providing care that is not medically necessary or that is substandard in quality. The PPACA also provides that claims submitted in connection with patient referrals that result from violations of the Anti-Kickback Statute constitute false claims for the purpose of the FCA, and some courts have held that a violation of the Stark law can result in FCA liability, as well. In addition, a number of states have adopted their own false claims and whistleblower provisions whereby a private party may file a civil lawsuit in state court. We are required to provide information to our employees and certain contractors about state and federal false claims laws and whistleblower provisions and protections.

Civil Monetary Penalties Law

The Civil Monetary Penalties Law prohibits, among other things, the offering or giving of remuneration to a Medicare or Medicaid beneficiary that the person or entity knows or should know is likely to influence the beneficiary’s selection of a particular provider or supplier of items or services reimbursable by a federal or state healthcare program. This broad provision applies to many kinds of inducements or benefits provided to patients, including complimentary items, services or transportation that are of more than a nominal value. This law could affect how we have to structure our operations and activities.

Intellectual Property Risks Related to Our Business

We cannot be certain that measures taken to protect our intellectual property will be effective.

We rely upon trade secrets, copyright and trademark laws, non-disclosure agreements and other contractual confidentiality provisions to protect our confidential and proprietary information that we are not seeking patent protection for various reasons. Such measures, however, may not provide adequate protection for our trade secrets or other proprietary information. If such measures do not protect our rights, third parties could use our technology and our ability to compete in the market would be reduced.

We depend on certain technologies that are licensed to us. We do not control these technologies and any loss of our rights to them could prevent us from selling some of our products.

We have entered into license agreements with third parties for certain licensed technologies that are, or may become, relevant to the products we market, or plan to market, including our license agreement with

TABLE OF CONTENTS

Dana-Farber Cancer Institute, Inc., pursuant to which we license our ICE-COLD-PCR technology. In addition, we may in the future elect to license third party intellectual property to further our business objectives and/or as needed for freedom to operate for our products. We do not and will not own the patents, patent applications or other intellectual property rights that are the subject of these licenses. Our rights to use these technologies and employ the inventions claimed in the licensed patents, patent applications and other intellectual property rights are or will be subject to the continuation of and compliance with the terms of those licenses.

We might not be able to obtain licenses to technology or other intellectual property rights that we require. Even if such licenses are obtainable, they may not be available at a reasonable cost or multiple licenses may be needed for the same product (e.g., stacked royalties). We could therefore incur substantial costs related to royalty payments for licenses obtained from third parties, which could negatively affect our gross margins. Further, we could encounter delays in product introductions, or interruptions in product sales, as we develop alternative methods or products.

In some cases, we do not or may not control the prosecution, maintenance, or filing of the patents or patent applications to which we hold licenses, or the enforcement of these patents against third parties. As a result, we cannot be certain that drafting or prosecution of the licensed patents and patent applications by the licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents and other intellectual property rights.

Third parties may assert ownership or commercial rights to inventions we develop.

Third parties may in the future make claims challenging the inventorship or ownership of our intellectual property. For example, third parties that have been introduced to or have benefited from our inventions may attempt to replicate or reverse engineer our products and circumvent ownership of our inventions. In addition, we may face claims that our agreements with employees, contractors, or consultants obligating them to assign intellectual property to us are ineffective, or in conflict with prior or competing contractual obligations of assignment, which could result in ownership disputes regarding intellectual property we have developed or will develop and interfere with our ability to capture the commercial value of such inventions. Litigation may be necessary to resolve an ownership dispute, and if we are not successful, we may be precluded from using certain intellectual property, or may lose our exclusive rights in that intellectual property. Either outcome could have an adverse impact on our business.

Third parties may assert that our employees or consultants have wrongfully used or disclosed confidential information or misappropriated trade secrets.

Although we try to ensure that our employees and consultants do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of a former employer or other third parties. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

The testing, manufacturing and marketing of medical diagnostic devices entails an inherent risk of product liability and personal injury claims.

To date, we have experienced no product liability or personal injury claims, but any such claims arising in the future could have a material adverse effect on our business, financial condition and results of operations. Potential product liability or personal injury claims may exceed the amount of our insurance coverage or may be excluded from coverage under the terms of our policy or limited by other claims under our umbrella insurance policy. Additionally, our existing insurance may not be renewed by us at a cost and level of coverage comparable to that presently in effect, if at all. In the event that we are held liable for a claim against which we are not insured or for damages exceeding the limits of our insurance coverage, such claim could have a material adverse effect on our cash flow and thus potentially a materially adverse effect on our business, financial condition and results of operations.

TABLE OF CONTENTS

All of our diagnostic technology development and our clinical services are performed at two laboratories, and in the event either or both of these facilities were to be affected by a termination of the lease or a man-made or natural disaster, our operations could be severely impaired.

We are performing all of our diagnostic services in our CLIA laboratory located in New Haven, Connecticut and our research and development operations are based in our facility in Omaha, Nebraska. Despite precautions taken by us, any future natural or man-made disaster at these laboratories, such as a fire, earthquake or terrorist activity, could cause substantial delays in our operations, damage or destroy our equipment and testing samples or cause us to incur additional expenses.

In addition, we are leasing the facilities where our laboratories operate. We are currently in compliance with all and any lease obligations, but should the leases terminate for any reason, or if at any time either of the laboratories is moved due to conditions outside our control, it could cause substantial delay in our diagnostics operations, damage or destroy our equipment and biological samples or cause us to incur additional expenses. In the event of an extended shutdown of either laboratory, we may be unable to perform our services in a timely manner or at all and therefore would be unable to operate in a commercially competitive manner. This could harm our operating results and financial condition.

Further, if we have to use a substitute laboratory while our facilities were shut down, we could only use another facility with established state licensure and accreditation under CLIA. We may not be able to find another CLIA-certified facility and comply with applicable procedures, or find any such laboratory that would be willing to perform the tests for us on commercially reasonable terms. Additionally, any new laboratory opened by us would be subject to certification under CLIA and licensure by various states, which would take a significant amount of time and result in delays in our ability to continue our operations.

TABLE OF CONTENTS

Risks Related to Our Common Stock

The price of our common stock may fluctuate significantly, which could negatively affect us and holders of our common stock.

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:

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, or other aspects of our business;
- changes to reimbursement levels by commercial third-party payors and government payors, including Medicare, and any announcements relating to reimbursement levels;
- 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 has experienced 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.

The price of our stock may be vulnerable to manipulation.

We believe our common stock has been the subject of significant short selling by certain market participants. Short sales are transactions in which a market participant sells a security that it does not own. To complete the transaction, the market participant must borrow the security to make delivery to the buyer. The market participant is then obligated to replace the security borrowed by purchasing the security at the market price at the time of required replacement. If the price at the time of replacement is lower than the

TABLE OF CONTENTS

price at which the security was originally sold by the market participant, then the market participant will realize a gain on the transaction. Thus, it is in the market participant's interest for the market price of the underlying security to decline as much as possible during the period prior to the time of replacement.

Because our unrestricted public float has been small relative to other issuers, previous short selling efforts have impacted, and may in the future continue to impact, the value of our stock in an extreme and volatile manner to our detriment and the detriment of our shareholders. Efforts by certain market participants to manipulate the price of our common stock for their personal financial gain may cause our stockholders to lose a portion of their investment, may make it more difficult for us to raise equity capital when needed without significantly diluting existing stockholders, and may reduce demand from new investors to purchase shares of our stock.

If we cannot continue to satisfy NASDAQ listing maintenance requirements and other rules, our common stock may be delisted, which could negatively impact the price of our securities.

Although our common stock is listed on the NASDAQ Capital Market, we may be unable to continue to satisfy the listing maintenance requirements and rules. If we are unable to satisfy The NASDAQ Stock Market, or NASDAQ, criteria for maintaining our listing, our securities could be subject to delisting.

On March 26, 2018, we received a letter from NASDAQ notifying us that for the past 30 consecutive business days, the closing bid price per share of our common stock was below the $1.00 minimum bid price requirement for continued listing on the NASDAQ Capital Market, as required by NASDAQ Listing Rule 5550(a)(2), or the Bid Price Rule. As a result, we were notified by NASDAQ that we are not in compliance with the Bid Price Rule. NASDAQ has provided us with 180 calendar days, or until September 24, 2018, to regain compliance with the Bid Price Rule. On September 25, 2018, we received a letter from NASDAQ notifying us that we are eligible for an additional 180 day extension, or until March 25, 2019, to regain compliance.

To regain compliance with the Bid Price Rule, the closing bid price of our common stock must meet or exceed $1.00 per share for a minimum of ten consecutive business days during the additional 180 day grace period. If our common stock does not regain compliance with the Bid Price Rule during this grace period, we will receive written notification from NASDAQ that our securities will be delisted. At that time, we may appeal to a hearing's panel and expect to have to provide a plan to regain compliance.

We are presently evaluating various courses of action to regain compliance with the Bid Price Rule. However, there can be no assurance that we will be able to regain compliance.

If NASDAQ delists our securities, we could face significant consequences, including:

- a limited availability for market quotations for our securities;
- reduced liquidity with respect to our securities;
- a determination that our common stock is a "penny stock," which will require brokers trading in our common stock to adhere to more stringent rules and possibly result in reduced trading;
- activity in the secondary trading market for our common stock;
- limited amount of news and analyst coverage; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

In addition, we would no longer be subject to NASDAQ rules, including rules requiring us to have a certain number of independent directors and to meet other corporate governance standards.

Increased costs associated with corporate governance compliance may significantly impact our results of operations. As a public company, we incur significant legal, accounting, and other expenses due to our compliance with regulations and disclosure obligations applicable to us, including compliance with the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, as well as rules implemented by the SEC, and NASDAQ. The SEC and other regulators have continued to adopt new rules and regulations and make additional changes to

TABLE OF CONTENTS

existing regulations that require our compliance. In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that have required the SEC to adopt additional rules and regulations in these areas. Stockholder activism, the current political environment, and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact, in ways we cannot currently anticipate, the manner in which we operate our business. Our management and other personnel devote a substantial amount of time to these compliance programs and monitoring of public company reporting obligations, and as a result of the new corporate governance and executive compensation related rules, regulations, and guidelines prompted by the Dodd-Frank Act, and further regulations and disclosure obligations expected in the future, we will likely need to devote additional time and costs to comply with such compliance programs and rules. These rules and regulations will cause us to incur significant legal and financial compliance costs and will make some activities more time-consuming and costly.

The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file with the SEC is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that information required to be disclosed in reports under the Exchange Act is accumulated and communicated to our principal executive and financial officers. Our current controls and any new controls that we develop may become inadequate, and weaknesses in our internal control over financial reporting may be discovered in the future. Any failure to develop or maintain effective controls could adversely affect the results of periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting, which we may be required to include in our periodic reports that we file with the SEC under Section 404 of the Sarbanes-Oxley Act, and could harm our operating results, cause us to fail to meet our reporting obligations, or result in a restatement of our prior period financial statements. If we are not able to demonstrate compliance with the Sarbanes-Oxley Act, that our internal control over financial reporting is perceived as inadequate, or that we are unable to produce timely or accurate financial statements, investors may lose confidence in our operating results, and the price of our common stock could decline.

We are required to comply with certain of the SEC rules that implement Section 404 of the Sarbanes-Oxley Act, which requires management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of our internal control over financial reporting. This assessment needs to include the disclosure of any material weaknesses in our internal control over financial reporting identified by our management or our independent registered public accounting firm. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting or if we are unable to complete our evaluation, testing, and any required remediation in a timely fashion, we will be unable to assert that our internal control over financial reporting is effective.

These developments could make it more difficult for us to retain qualified members of our Board of Directors, or qualified executive officers. We are presently evaluating and monitoring regulatory developments and cannot estimate the timing or magnitude of additional costs we may incur as a result. To the extent these costs are significant, our general and administrative expenses are likely to increase.

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.

TABLE OF CONTENTS

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.

The sale or issuance of our common stock to Lincoln Park may cause significant dilution and the sale of the shares of common stock acquired by Lincoln Park, or the perception that such sales may occur, could cause the price of our common stock to fall

On September 7, 2018, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has committed to purchase up to $10,000,000 of our common stock. Upon the execution of the Purchase Agreement, we issued 600,000 Commitment Shares to Lincoln Park as a fee for its commitment to purchase shares of our common stock under the Purchase Agreement. The remaining shares of our common stock that may be issued under the Purchase Agreement may be sold by us to Lincoln Park at our discretion from time to time over a 24-month period commencing after the satisfaction of certain conditions set forth in the Purchase Agreement, including that the SEC has declared effective the registration statement that includes this prospectus. The purchase price for the shares that we may sell to Lincoln Park under the Purchase Agreement will fluctuate based on the price of our common stock. Depending on market liquidity at the time, sales of such shares may cause the trading price of our common stock to fall.

We generally have the right to control the timing and amount of any future sales of our shares to Lincoln Park. Additional sales of our common stock, if any, to Lincoln Park will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some or none of the additional shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all, some or none of those shares at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us could result in substantial dilution to the interests of other holders of our common stock. Additionally, the sale of a substantial number of shares of our common stock to Lincoln Park, or the anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

The issuance of our common stock to creditors or litigants may cause significant dilution to our stockholders and cause the price of our common stock to fall

We may seek to settle outstanding obligations to vendors, debtholders or litigants in any litigation through the issuance of our common stock or other security to such persons. Such issuances may cause significant dilution to our stockholders and cause the price of our common stock to fall.

TABLE OF CONTENTS

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” contains forward-looking statements that are based on our management’s belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- our use of the net proceeds from this offering;
- 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.

TABLE OF CONTENTS

In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “intends,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue” or the negative of these terms or o comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which are, in some cases, beyond our control and which could materially affect results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under “Risk Factors” and elsewhere in this prospectus. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this prospectus and the documents that we reference in this prospectus and have filed with the SEC as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements. The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

TABLE OF CONTENTS

USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by Lincoln Park. We will receive no proceeds from the sale of shares of common stock by Lincoln Park in this offering. We may receive up to $10,000,000 aggregate gross proceeds under the Purchase Agreement from any sales we make to Lincoln Park pursuant to the Purchase Agreement after the date of this prospectus. We estimate that the net proceeds to us from the sale of our common stock to Lincoln Park pursuant to the Purchase Agreement will be up to $9,950,000 over an approximately 24-month period, assuming that we sell the full amount of our common stock that we have the right, but not the obligation, to sell to Lincoln Park under that agreement and other estimated fees and expenses. See "Plan of Distribution" in this prospectus for more information.

We expect to use any proceeds that we receive under the Purchase Agreement for working capital and general corporate purposes.

TABLE OF CONTENTS

SELLING STOCKHOLDER

This prospectus relates to the possible resale by the selling stockholder, Lincoln Park, of shares of common stock that have been or may be issued to Lincoln Park pursuant to the Purchase Agreement. We are filing the registration statement of which this prospectus forms a part pursuant to the provisions of the Registration Rights Agreement, which we entered into with Lincoln Park on September 7, 2018 concurrently with our execution of the Purchase Agreement, in which we agreed to provide certain registration rights with respect to sales by Lincoln Park of the shares of our common stock that have been or may be issued to Lincoln Park under the Purchase Agreement.

Lincoln Park, as the selling stockholder, may, from time to time, offer and sell pursuant to this prospectus any or all of the shares that we have issued or may sell to Lincoln Park under the Purchase Agreement. The selling stockholder may sell some, all or none of its shares. We do not know how long the selling stockholder will hold the shares before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholder regarding the sale of any of the shares.

The following table presents information regarding the selling stockholder and the shares that it may offer and sell from time to time under this prospectus. The table is prepared based on information supplied to us by the selling stockholder, and reflects its holdings as of September 7, 2018. Neither Lincoln Park nor any of its affiliates has held a position or office, or had any other material relationship, with us or any of our predecessors or affiliates. Beneficial ownership is determined in accordance with Section 13(d) of the Exchange Act and Rule 13d-3 thereunder.

Selling Stockholder	Shares Beneficially Owned Before this Offering	Percentage of Outstanding Shares Beneficially Owned Before this Offering	Shares to be Sold in this Offering Assuming The Company issues the Maximum Number of Shares Under the Purchase Agreement	Percentage of Outstanding Shares Beneficially Owned After this Offering
Lincoln Park Capital Fund, LLC(1)	603,067(2)	2.54%(3)	7,000,000(4)	*

•
less than 1%

(1)
Josh Scheinfeld and Jonathan Cope, the Managing Members of Lincoln Park Capital, LLC, are deemed to be beneficial owners of all of the shares of common stock owned by Lincoln Park Capital Fund, LLC. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares being offered under the prospectus filed with the SEC in connection with the transactions contemplated under the Purchase Agreement. Lincoln Park Capital, LLC is not a licensed broker dealer or an affiliate of a licensed broker dealer.

(2)
Represents (i) 600,000 Commitment Shares of our common stock issued to Lincoln Park upon our execution of the Purchase Agreement as a fee for its commitment to purchase shares of our common stock under the Purchase Agreement, all of which shares are covered by the registration statement that includes this prospectus; and (ii) an aggregate of 3,067 shares of our common stock, representing shares that may be issued to Lincoln Park as of the date of this prospectus upon exercise of warrants to purchase our common stock, at certain fixed prices (that may be subject to adjustment as provided in such warrants), which warrants were acquired by Lincoln Park in connection with prior public offerings of securities. Lincoln Park may not exercise these warrants if such shares, when aggregated with

all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park and its affiliates having beneficial ownership of more than 4.99% of the then total outstanding shares of our common stock, as calculated in accordance with the terms of such warrants. In accordance with rule 13d-3(d) under the Exchange Act, we have excluded from the number of shares beneficially owned prior to the offering all of the shares of common stock that Lincoln Park may be required to purchase pursuant to the Purchase Agreement because the issuance of such shares is solely at our discretion and is subject to certain conditions, the satisfaction of all of which are outside of Lincoln Park's control, including the registration statement of which this prospectus is a part becoming and remaining effective. Furthermore, under the terms of the Purchase Agreement, issuances and sales of shares of our common stock to Lincoln Park are subject to certain

TABLE OF CONTENTS

limitations on the amounts we may sell to Lincoln Park at any time, including the Exchange Cap and the Beneficial Ownership Cap. See the description under the heading “The Lincoln Park Transaction” for more information about the Purchase Agreement.

(3)

Based on 23,155,872 outstanding shares of our common stock as of September 11, 2018, which excludes the 600,000 Commitment Shares we have already issued to Lincoln Park pursuant to the Purchase Agreement.

(4)

Although the Purchase Agreement provides that we may sell up to $10,000,000 of our common stock to Lincoln Park, only 7,000,000 shares of our common stock are being offered under this prospectus, which represents: (i) 600,000 Commitment Shares issued to Lincoln Park upon our execution of the Purchase Agreement as a fee for its commitment to purchase shares of our common stock under the Purchase Agreement; and (ii) an aggregate of 6,400,000 shares of our common stock that may be sold by us to Lincoln Park at our discretion from time to time over a 24-month period commencing after the satisfaction of certain conditions set forth in the Purchase Agreement, including that the SEC has declared effective the registration statement that includes this prospectus. Depending on the price per share at which we sell our common stock to Lincoln Park pursuant to the Purchase Agreement, we may need to sell to Lincoln Park under the Purchase Agreement more shares of our common stock than are offered under this prospectus in order to receive aggregate gross proceeds equal to the $10,000,000 total commitment available to us under the Purchase Agreement. If we choose to do so, we must first register for resale under the Securities Act such additional shares. The number of shares ultimately offered for resale by Lincoln Park is dependent upon the number of shares we sell to Lincoln Park under the Purchase Agreement.

TABLE OF CONTENTS

PRICE RANGE OF COMMON STOCK

Since June 30, 2017, the trading date following the consummation of the Merger, our common stock has traded on the NASDAQ Capital Market under the symbol “PRPO.”

Prior to the Merger, our common stock was traded on the NASDAQ Capital Market under the symbol “TBIO.” Our common stock was suspended from trading on the NASDAQ Capital Market on February 17, 2017 and on February 22, 2017, our shares began trading on the OTCQB exchange under the ticker “TBIO” and remained on the OTCQB exchange until the date of the Merger. In connection with the merger, our common stock commenced trading on the NASDAQ Capital Market under the symbol “PRPO.”

The following table sets forth, for the periods indicated, the closing prices of our common stock as reported on the market exchanges noted above. The over-the-counter market quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not necessarily represent actual transactions. The per share prices reflect a 1-for-30 reverse stock split effected on June 13, 2017:

	Fiscal Year 2018	
	High	Low
First Quarter	$ 1.30	$ 0.48
Second Quarter	$ 0.55	$ 0.36
Third Quarter (through September 11, 2018)	$ 0.51	$ 0.33

	Fiscal Year 2017	
	High	Low
First Quarter	$ 33.60	$ 7.80
Second Quarter	$ 16.86	$ 4.90
Third Quarter	$ 20.10	$ 1.80
Fourth Quarter	$ 2.23	$ 1.08

	Fiscal Year 2016	
	High	Low
First Quarter	$ 32.41	$ 16.20
Second Quarter	$ 21.92	$ 15.00
Third Quarter	$ 17.36	$ 8.37
Fourth Quarter	$ 11.04	$ 4.75

On September 11, 2018, the closing price of our common stock as reported on The NASDAQ Capital Market was $0.39 per share. As of September 11, 2018, there were approximately 78 holders of record and 23,155,872 shares of our common stock outstanding, which excludes the 600,000 Commitment Shares we have already issued to Lincoln Park pursuant to the Purchase Agreement.

TABLE OF CONTENTS

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of June 30, 2018:

- on an actual basis

- on a pro forma basis to give effect to:

the issuance of 596,300 shares of our common stock, subsequent to June 30, 2018, as a result of the exercise of 596,300 warrants to purchase shares of the Company's common stock; and

the receipt of $348,104, in July 2018, pursuant to the Debt Financing Agreement. This was the second round of notes closed under the Debt Financing Agreement and provided the Company with $348,104 of proceeds for the issuance of notes with an aggregate principal of $382,526. As part of this closing, we issued to the investors 765,052 warrants to purchase shares of our common stock with an exercise price of $0.75. Half of these warrants have a one-year term and half have a five-year term. Estimated debt discount and debt issuance costs related to these notes were approximately $252,000.

the receipt of $495,955, in August 2018, pursuant to the Debt Financing Agreement. This was the second round of notes closed under the Debt Financing Agreement and provided the Company with $495,955 of proceeds for the issuance of notes with an aggregate principal of $544,999. As part of this closing, we issued to the investors 1,090,000 warrants to purchase shares of our common stock with an exercise price of $0.75. Half of these warrants have a one-year term and half have a five-year term. Estimated debt discount and debt issuance costs related to these notes were approximately $544,999.

- on a pro forma as adjusted basis to give further effect to (i) our sale of 6,400,000 shares of common stock in this offering and our receipt of the net proceeds therefrom at an assumed public offering price of $0.39 per share, after deducting estimated offering expenses payable by us and the issuance of 600,000 shares as a commitment fee per the Purchase Agreement.

The following information is illustrative only of our cash and capitalization following the completion of this offering and will change based on the actual public offering price and other terms of this offering determined at pricing. You should read this table in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our condensed consolidated financial statements and related notes in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, filed with the SEC on August 16, 2018.

	As of June 30, 2018		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands)		
Cash	$ 71	$ 1,094	$ 3,540
Current maturities of long-term debt	831	831	831
Convertible bridge notes, less debt discounts and debt issuance costs	9	139	139
Long-term debt	2,659	2,659	2,659

Common stock warrant liability and derivative liability	1,149	1,645	1,645
Capital leases (Current & Long term)	239	239	239

29

TABLE OF CONTENTS

	As of June 30, 2018		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands)		
Stockholders' (deficit) equity:			
Preferred stock, $0.01 par value per share; 15,000,000 shares authorized, actual, pro forma and pro forma as adjusted, 47 shares of Series B Preferred Stock issued and outstanding as of June 30, 2018, actual, pro forma and pro forma as adjusted	—	—	—
Common stock, $0.001 par value per share; 150,000,000 shares authorized, actual, pro forma and pro forma as adjusted; 22,559,572 shares issued and outstanding at June 30, 2018, actual; 23,155,872 shares issued and outstanding, pro forma; 30,155,872 shares issued and outstanding, pro forma as adjusted;	226	232	302
Additional paid-in capital	49,245	49,636	52,012
Accumulated deficit	(37,272)	(37,272)	(37,272)
Total stockholders' (deficit) equity	12,199	12,596	15,042
Total capitalization	$ 7,312	$ 7,083	$ 9,529

The preceding data is based on 23,155,872 shares outstanding as of September 11, 2018, which excludes the 600,000 Commitment Shares we have already issued to Lincoln Park pursuant to the Purchase Agreement. This number excludes the following, all of which, if issued by the Company, would be dilutive to our stockholders:

- 3,489,019 common shares issuable upon the exercise of stock options outstanding as of September 11, 2018, at a weighted average exercise price of $1.05 per share;

- 8,171,891 shares of common stock issuable upon exercise of warrants that were outstanding as of September 11, 2018 at a weighted-average exercise price of $2.28 per share;

- 2,575,346 shares of common stock reserved for future issuance under our 2017 Stock Option and Incentive Plan, as well as any automatic increases in the number of common shares reserved for issuance under the 2017 Stock Option and Incentive Plan after the date of this prospectus;

- 156,667 shares of our common stock issuable upon conversion of 47 shares of our Series B Preferred Stock; and

- 5,503,402 shares of common stock issuable upon conversion of convertible promissory notes outstanding as of September 11, 2018, which amount may increase significantly if the notes are note repaid or converted within 180 days of the issuance.

Also, to the extent that we issue any common stock to vendors, lenders, litigants or potential litigants, the issuance of such securities could result in significant dilution to our stockholders.

TABLE OF CONTENTS

DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock after this offering. As of June 30, 2018, our historical net tangible book value was $(12.0) million, or $(0.53) per share of common stock, based on 22,559,572 shares of our common stock outstanding at June 30, 2018. 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 June 30, 2018.

Our pro forma net tangible book value as of June 30, 2018 was $(11.6) million, or $(0.50) per share of common stock. Pro forma net tangible book value per share represents total tangible assets less total liabilities, divided by the number of shares of common stock outstanding, assuming (i) the issuance of 596,300 shares of our common stock, subsequent to June 30, 2018, as a result of the exercise of 596,300 warrants to purchase shares of the Company's common stock; (ii) the receipt of $348,104, in July 2018, pursuant to the Debt Financing Agreement. This was the second round of notes closed under the Debt Financing Agreement and provided the Company with $348,104 of proceeds for the issuance of notes with an aggregate principal of $382,526 and related debt discount and debt issuance costs of approximately $252,000; and (iii) the receipt of $495,955, in August 2018, pursuant the Debt Financing Agreement. This was the third round of notes closed under the Debt Financing Agreement and provided the Company with $495,955 of proceeds for the issuance of notes with an aggregate principal of $544,999 and related debt discount and debt issuance costs of approximately $544,999.

After giving effect to the sale by us of 6,400,000 shares of our common stock in this offering at the assumed public offering price of $0.39 per share, after deducting estimated offering expenses payable by us and the issuance by us of 600,000 shares of common stock as a commitment fee, our pro forma as adjusted net tangible book value as of June 30, 2018 would have been $(9.2) million, or $(0.30) per share. This represents an immediate increase in pro forma net tangible book value of $0.20 per share to our existing stockholders and an immediate dilution of $0.69 per share to our new investors purchasing shares of common stock in this offering. The following table illustrates this dilution on a per share basis:

Assumed public offering price per share		$ 0.39
Historical net tangible book value per share as of June 30, 2018	$ (0.53)	
Increase in net tangible book value per share attributable to the pro forma adjustments described above	$ 0.03	
Pro forma net tangible book value per share as of June 30, 2018	$ (0.50)	
Increase in pro forma net tangible book value per share attributable to this offering	$ 0.20	
Pro forma as adjusted net tangible book value per share after this offering		(0.30)
Dilution per share to new investors in this offering		$ 0.69

The preceding data is based on 23,155,872 shares outstanding as of September 11, 2018, which excludes the 600,000 Commitment Shares we have already issued to Lincoln Park pursuant to the Purchase Agreement. This number excludes the following, all of which, if issued by the Company, would be dilutive to our stockholders:

- 3,489,019 common shares issuable upon the exercise of stock options outstanding as of September 11, 2018, at a weighted average exercise price of $1.05 per share;

- 8,171,891 shares of common stock issuable upon exercise of warrants that were outstanding as of September 11, 2018 at a weighted-average exercise price of $2.28 per share;

-

2,575,346 shares of common stock reserved for future issuance under our 2017 Stock Option and Incentive Plan, as well as any automatic increases in the number of common shares reserved for issuance under the 2017 Stock Option and Incentive Plan after the date of this prospectus;

- 156,667 shares of our common stock issuable upon conversion of 47 shares of our Series B Preferred Stock; and

TABLE OF CONTENTS

- 5,503,402 shares of common stock issuable upon conversion of convertible promissory notes outstanding as of September 11, 2018, which amount may increase significantly if the notes are note repaid or converted within 180 days of the issuance.

To the extent that stock options are exercised or new stock options are issued under our equity incentive plans, there will be further dilution to investors purchasing common stock in this offering. In addition, we need to raise additional capital because of market conditions and strategic considerations. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

Also, to the extent that we issue any common stock to vendors, lenders, litigants or potential litigants, the issuance of such securities could result in significant dilution to our stockholders.

DIVIDEND POLICY

We have never declared or paid dividends on our capital stock. We do not anticipate paying any dividends on our capital stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. Any future determination to declare dividends will be subject to the discretion of our board of directors and will depend on various factors, including applicable laws, our results of operations, financial condition, future prospects and any other factors deemed relevant by our board of directors. Investors should not purchase our common stock with the expectation of receiving cash dividends.

TABLE OF CONTENTS

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 150,000,000 shares of common stock, par value $0.01 per share, and 15,000,000 shares of preferred stock, par value $0.01 per share, and as of December 31, 2017 there were 10,196,620 shares of common stock outstanding and 4,935 shares of preferred stock outstanding. As of the date of September 11, 2018, there were 23,155,872 shares of our common stock outstanding, which excludes the 600,000 Commitment Shares we have already issued to Lincoln Park pursuant to the Purchase Agreement, and approximately 78 holders of record. In addition, as of September 11, 2018, options to purchase 3,489,019 shares of our common stock were outstanding, 2,575,346 shares of our common stock were reserved for future grants under our stock option plans and warrants to purchase 8,171,891 shares of our common stock were outstanding.

The following description of our capital stock and provisions of our amended and restated certificate of incorporation, amended and restated by-laws, certificate of designations and outstanding warrants are summaries of material terms and provisions and are qualified by reference to our amended and restated certificate of incorporation, amended and restated by-laws, certificate of designations and outstanding warrants, copies of which have been previously filed with the SEC.

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.

TABLE OF CONTENTS

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

TABLE OF CONTENTS

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. In November 2017, at the time of the Company's issuance of its Series C Preferred Stock, the conversion price of the Series B Preferred Stock was reduced from $2.50 per share to $1.40 per share. In February 2018, the Company entered into an equity purchase agreement and, as a result, the conversion price of the Company's Series B Convertible Preferred Stock was automatically adjusted from the reduced $1.40 per share price to $1.04 per share. On March 21, 2018, the Series B Conversion Price was reduced from $1.04 to $0.75 as a result of our letter agreement with certain holders of shares of the Company's series B Preferred Stock and Series C Preferred Stock (the "Letter Agreement"). In April 2018, as a result of a securities purchase agreement pursuant to which the Company will issue up to approximately $3.3 million in Senior Secured Convertible Promissory Notes, the conversion price of the Company's Series B Convertible Preferred Stock was automatically adjusted from $0.75 per share to $0.30 per share and is 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.

At June 30, 2018, all but 47 shares of the Company's Series B Preferred Stock had been converted to shares of common stock of the Company.

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.

TABLE OF CONTENTS

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 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

TABLE OF CONTENTS

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.

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" was 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. In February 2018, the Company entered into an equity purchase agreement and, as a result, the Series C Conversion Price was automatically adjusted from $1.40 per share to $1.04 per share. On March 21, 2018, the Series C Conversion Price was reduced to $0.75 as a result of the Letter Agreement. All of the Series C Preferred Stock had been converted to shares of the Company's common stock by March 31, 2018. 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.

TABLE OF CONTENTS

Antitakeover Effects of Delaware Law and Provisions of our Amended and Restated Certificate of Incorporation and Amended and Restated By-laws

Certain provisions of the Delaware General Corporation Law and of our amended and restated certificate of incorporation and amended and restated by-laws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and, as a consequence, they might also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions are also designed in part to encourage anyone seeking to acquire control of us to first negotiate with our board of directors. These provisions might also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests. However, we believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Delaware Takeover Statute

We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

- upon consummation of the transaction which 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 commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or

- at or after the time the stockholder became interested, the business combination was approved by our board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;

- any sale, transfer, lease, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;

- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;

-

subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of 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 loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

TABLE OF CONTENTS

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Provisions of our Amended and Restated Certificate of Incorporation and Amended and Restated By-laws

Our amended and restated certificate of incorporation and amended and restated by-laws include a number of provisions that may have the effect of delaying, deferring or discouraging another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board composition and filling vacancies. In accordance with our amended and restated certificate of incorporation, our board is divided into three classes serving staggered three-year terms, with one class being elected each year. Our amended and restated certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum.

No written consent of stockholders. Our amended and restated certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our by-laws or removal of directors by our stockholder without holding a meeting of stockholders.

Meetings of stockholders. Our amended and restated by-laws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our amended and restated by-laws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance notice requirements. Our amended and restated by-laws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days or more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. The notice must contain certain information specified in our amended and restated by-laws.

Amendment to certificate of incorporation and by-laws. As required by the Delaware General Corporation Law, any amendment of our amended and restated certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our amended and restated certificate of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment, and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, directors, limitation of liability and the amendment of our amended and restated certificate of incorporation must be approved by not less than 75% of the outstanding shares entitled to vote on the amendment, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class. Our amended and restated by-laws may be amended by the affirmative vote of a majority vote of the directors then in office, subject to any limitations set forth in the amended and restated by-laws; and may also be amended by the affirmative vote of at least 75% of the outstanding shares entitled to vote on the amendment, or, if the board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

TABLE OF CONTENTS

Undesignated preferred stock. Our amended and restated certificate of incorporation provides for authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of us or our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation grants our board of director's broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Choice of forum. Our amended and restated by-laws provide that the Court of Chancery of the State of Delaware is the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our certificate of incorporation or our by-laws, or any action asserting a claim against us that is governed by the internal affairs doctrine. Although our amended and restated by-laws contain the choice of forum provision described above, it is possible that a court could rule that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is EQ Shareowner Services.

Listing

Our common stock is listed on The NASDAQ Capital Market under the symbol "PRPO."

TABLE OF CONTENTS

THE LINCOLN PARK TRANSACTION

General

On September 7, 2018, we entered into the Purchase Agreement and the Registration Rights Agreement with Lincoln Park. Pursuant to the terms of the Purchase Agreement, Lincoln Park has agreed to purchase from us up to $10,000,000 of our common stock (subject to certain limitations) from time to time during the term of the Purchase Agreement. Pursuant to the terms of the Registration Rights Agreement, we have filed with the SEC the registration statement that includes this prospectus to register for resale under the Securities Act the shares that have been or may be issued to Lincoln Park under the Purchase Agreement.

Pursuant to the terms of the Purchase Agreement, at the time we executed the Purchase Agreement and the Registration Rights Agreement, we issued 600,000 Commitment Shares to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement.

We do not have the right to commence any sales to Lincoln Park under the Purchase Agreement until certain conditions set forth in the Purchase Agreement, all of which are outside of Lincoln Park's control, have been satisfied, including the registration statement that includes this prospectus being declared effective by the SEC. Thereafter, we may, from time to time and at our sole discretion, on any single business day on which the closing price of our common stock is not less than $0.10 per share (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), direct Lincoln Park to purchase shares of our common stock in regular purchases in amounts up to 450,000 shares which amounts may be increased to up to 550,000 shares depending on the market price of our common stock at the time of sale and subject to a maximum commitment by Lincoln Park of $1,000,000 per singular regular purchase. The purchase price per share sold in a regular purchase will be based on the market price of our common stock immediately preceding the time of sale as computed under the Purchase Agreement. Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

Under applicable rules of The NASDAQ Capital Market, in no event may we issue or sell to Lincoln Park under the Purchase Agreement shares of our common stock in excess of the Exchange Cap (which is 4,628,859 shares, or 19.99% of the shares of our common stock outstanding immediately prior to the execution of the Purchase Agreement), unless (i) we obtain stockholder approval to issue shares of common stock in excess of the Exchange Cap or (ii) the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equals or exceeds $0.4728 (which represents the closing consolidated bid price of our common stock on September 7, 2018, plus an incremental amount to account for our issuance of the Commitment Shares to Lincoln Park), such that issuances and sales of our common stock to Lincoln Park under the Purchase Agreement would be exempt from the Exchange Cap limitation under applicable NASDAQ rules. In any event, the Purchase Agreement specifically provides that we may not issue or sell any shares of our common stock under the Purchase Agreement if such issuance or sale would breach any applicable rules NASDAQ rules.

The Purchase Agreement also prohibits us from directing Lincoln Park to purchase any shares of common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park exceeding the Beneficial Ownership Cap.

Purchase of Shares Under the Purchase Agreement

Under the Purchase Agreement, on any business day selected by us on which the closing price of our common stock is not less than $0.10 per share (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), we may direct Lincoln Park to purchase up to 450,000 shares of our common stock in a regular purchase on such business day, provided, however, that (i) the Regular Purchase may be increased to up to 500,000 shares, provided that the closing sale price of our common stock is not below $0.50 on the purchase date (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement)

TABLE OF CONTENTS

and (ii) the Regular Purchase may be increased to up to 550,000 shares, provided that the closing sale price of our common stock is not below $0.75 on the purchase date (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement) (such share amount limitation, the "Regular Purchase Share Limit"). In each case, Lincoln Park's maximum commitment in any single Regular Purchase may not exceed $1,000,000. The Regular Purchase Share Limit is subject to proportionate adjustment in the event of a reorganization, recapitalization, non-cash dividend, stock split or other similar transaction; provided, that if after giving effect to such full proportionate adjustment, the adjusted Regular Purchase Share Limit would preclude us from requiring Lincoln Park to purchase common stock at an aggregate purchase price equal to or greater than $100,000 in any single Regular Purchase, then the Regular Purchase Share Limit will not be fully adjusted, but rather the Regular Purchase Share Limit for such Regular Purchase shall be adjusted as specified in the Purchase Agreement, such that, after giving effect to such adjustment, the Regular Purchase Share Limit will be equal to (or as close as can be derived from such adjustment without exceeding) $100,000.

The purchase price per share for each such Regular Purchase will be equal to the lower of:

- the lowest sale price for our common stock on the purchase date of such shares; or

- the arithmetic average of the three lowest closing sale prices for our common stock during the 10 consecutive business days ending on the business day immediately preceding the purchase date of such shares.

In addition to Regular Purchases described above, we may also direct Lincoln Park, on any business day on which we have properly submitted a Regular Purchase notice directing Lincoln Park to purchase the maximum number of shares of our common stock that we are then permitted to include in a single Regular Purchase notice and the closing sale price of our common stock on such business day is not below $0.25 per share (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), to purchase an additional amount of our common stock, which we refer to as an Accelerated Purchase, not to exceed the lesser of:

- 25% of the aggregate shares of our common stock traded during all or, if certain trading volume or market price thresholds specified in the Purchase Agreement are crossed on the applicable Accelerated Purchase date, which is defined as the next business day following the purchase date for the corresponding Regular Purchase, the portion of the normal trading hours on the applicable Accelerated Purchase date prior to such time that any one of such thresholds is crossed, which period of time on the applicable Accelerated Purchase date we refer to as the Accelerated Purchase Measurement Period; and

- 3 times the number of purchase shares purchased pursuant to the corresponding Regular Purchase.

The purchase price per share for each such Accelerated Purchase will be equal to the lower of:

- 96% of the volume weighted average price of our common stock during the applicable Accelerated Purchase Measurement Period on the applicable Accelerated Purchase date; and

- the closing sale price of our common stock on the applicable Accelerated Purchase date.

We may also direct Lincoln Park, not later than 1:00 p.m., Eastern time, on a business day on which an Accelerated Purchase has been completed and all of the shares to be purchased thereunder (and under the corresponding Regular Purchase) have been properly delivered to Lincoln Park in accordance with the Purchase Agreement prior to such time

on such business day, and provided that the closing price of our common stock on the business day immediately preceding such business day is not less than $0.25 per share (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), to purchase an additional amount of our common stock, which we refer to as an Additional Accelerated Purchase, of up to the lesser of:

- 25% of the aggregate shares of our common stock traded during a certain portion of the normal trading hours on such Accelerated Purchase date as determined in accordance with the Purchase Agreement, which period of time we refer to as the Additional Accelerated Purchase Measurement Period; and

TABLE OF CONTENTS

- 3 times the number of purchase shares purchased pursuant to the Regular Purchase corresponding to the Accelerated Purchase that was completed on such Accelerated Purchase date on which an additional accelerated Purchase notice was properly received.

We may, in our sole discretion, submit multiple Additional Accelerated Purchase notices to Lincoln Park prior to 1:00 p.m., Eastern time, on a single Accelerated Purchase date, provided that all prior Accelerated Purchases and Additional Accelerated Purchases (including those that have occurred earlier on the same day) have been completed and all of the shares to be purchased thereunder (and under the corresponding Regular Purchase) have been properly delivered to Lincoln Park in accordance with the Purchase Agreement.

The purchase price per share for each such Additional Accelerated Purchase will be equal to the lower of:

- 96% of the volume weighted average price of our common stock during the applicable Additional Accelerated Purchase Measurement Period on the applicable Additional Accelerated Purchase date; and

- the closing sale price of our common stock on the applicable Additional Accelerated Purchase date.

In the case of the Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases, the purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute the purchase price.

Other than as described above, there are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Lincoln Park.

Events of Default

Events of default under the Purchase Agreement include the following:

- the effectiveness of the registration statement of which this prospectus forms a part lapses for any reason (including, without limitation, the issuance of a stop order), or any required prospectus supplement and accompanying prospectus are unavailable for the resale by Lincoln Park of our common stock offered hereby, and such lapse or unavailability continues for a period of 10 consecutive business days or for more than an aggregate of 30 business days in any 365-day period;

- suspension by our principal market of our common stock from trading for a period of one business day;

- the de-listing of our common stock from The NASDAQ Capital Market, our principal market, provided our common stock is not immediately thereafter trading on the New York Stock Exchange, the NASDAQ Global Market, the NASDAQ Global Select Market, the NYSE Market, the OTC Bulletin Board or OTC Markets (or nationally recognized successor thereto);

- the failure of our transfer agent to issue to Lincoln Park shares of our common stock within two business days after the applicable date on which Lincoln Park is entitled to receive such shares;

- any breach of the representations or warranties or covenants contained in the Purchase Agreement or Registration Rights Agreement that has or could have a material adverse effect on us and, in the case of a breach of a covenant that is reasonably curable, that is not cured within five business days;

- if at any time the Exchange Cap is reached, to the extent applicable;

- any voluntary or involuntary participation or threatened participation in insolvency or bankruptcy proceedings by or against us; or

- if at any time we are not eligible to transfer our common stock electronically.

TABLE OF CONTENTS

Lincoln Park does not have the right to terminate the Purchase Agreement upon any of the events of default set forth above. During an event of default, all of which are outside of Lincoln Park's control, we may not direct Lincoln Park to purchase any shares of our common stock under the Purchase Agreement.

Our Termination Rights

We have the unconditional right, at any time, for any reason and without any payment or liability to us, to give notice to Lincoln Park to terminate the Purchase Agreement. In the event of bankruptcy proceedings by or against us, the Purchase Agreement will automatically terminate without action of any party.

No Short-Selling or Hedging by Lincoln Park

Lincoln Park has agreed that neither it nor any of its affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

Prohibitions on Variable Rate Transactions

There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement other than a prohibition on entering into a "Variable Rate Transaction," as defined in the Purchase Agreement.

Effect of Performance of the Purchase Agreement on Our Stockholders

All 7,000,000 shares registered in this offering which have been or may be issued or sold by us to Lincoln Park under the Purchase Agreement are expected to be freely tradable. It is anticipated that shares registered in this offering will be sold over a period of up to 24-months commencing on the date that the registration statement including this prospectus becomes effective. The sale by Lincoln Park of a significant amount of shares registered in this offering at any given time could cause the market price of our common stock to decline and to be highly volatile. Sales of our common stock to Lincoln Park, if any, will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some or none of the additional shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all, some or none of those shares at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. In addition, if we sell a substantial number of shares to Lincoln Park under the Purchase Agreement, or if investors expect that we will do so, the actual sales of shares or the mere existence of our arrangement with Lincoln Park may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales. However, we have the right to control the timing and amount of any additional sales of our shares to Lincoln Park and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

Pursuant to the terms of the Purchase Agreement, we have the right, but not the obligation, to direct Lincoln Park to purchase up to $10,000,000 of our common stock. Depending on the price per share at which we sell our common stock to Lincoln Park pursuant to the Purchase Agreement, we may need to sell to Lincoln Park under the Purchase Agreement more shares of our common stock than are offered under this prospectus in order to receive aggregate gross proceeds equal to the $10,000,000 total commitment available to us under the Purchase Agreement. If we choose to do so, we must first register for resale under the Securities Act such additional shares of our common stock, which could cause additional substantial dilution to our stockholders. The number of shares ultimately offered for resale by Lincoln Park under this prospectus is dependent upon the number of shares we direct Lincoln Park to purchase under the Purchase Agreement.

The Purchase Agreement prohibits us from issuing or selling to Lincoln Park under the Purchase Agreement (i) shares of our common stock in excess of the Exchange Cap, unless we obtain stockholder approval to issue shares in excess of the Exchange Cap or the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equal or exceed $0.4728, such that the

TABLE OF CONTENTS

transactions contemplated by the Purchase Agreement are exempt from the Exchange Cap limitation under applicable NASDAQ rules, and (ii) any shares of our common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would exceed the Beneficial Ownership Cap.

The following table sets forth the amount of gross proceeds we would receive from Lincoln Park from our sale of shares to Lincoln Park under the Purchase Agreement at varying purchase prices:

Assumed Average Purchase Price Per Share	Number of Registered Shares to be Issued if Full Purchase(1)	Percentage of Outstanding Shares After Giving Effect to the Issuance to Lincoln Park(2)	Proceeds from the Sale of Shares to Lincoln Park Under the $10M Purchase Agreement
$0.25	6,400,000	21.2%	$ 1,600,000
$0.39(3)	6,400,000	21.2%	$ 2,496,000
$0.50	6,400,000	21.2%	$ 3,200,000
$1.00	6,400,000	21.2%	$ 6,400,000
$2.00	5,000,000	17.4%	$ 10,000,000

(1)
Although the Purchase Agreement provides that we may sell up to $10,000,000 of our common stock to Lincoln Park, we are only registering at this time under the registration statement that includes this prospectus a total of 6,400,000 shares of our common stock that may be sold to Lincoln Park as purchase shares under the Purchase Agreement (together with the 600,000 Commitment Shares we are registering hereunder), which may or may not cover all the shares we ultimately sell to Lincoln Park under the Purchase Agreement, depending on the purchase price per share. As a result, we have included in this column only those shares that we are registering in this offering. If we seek to issue shares of our common stock, including shares from other transactions that may be aggregated with the transactions contemplated by the Purchase Agreement under the applicable rules of The NASDAQ Capital Market, in excess of 4,628,859 shares, or 19.99% of the total common stock outstanding immediately prior to the execution of the Purchase Agreement, we may be required to seek stockholder approval in order to be in compliance with the rules of The NASDAQ Capital Market.

(2)
The denominator is based on 23,155,872 shares of our common stock outstanding immediately prior to the execution of the Purchase Agreement on September 7, 2018, adjusted to include the issuance of (i) 600,000 Commitment Shares issued to Lincoln Park upon the execution of the Purchase Agreement, and (ii) the number of shares set forth in the adjacent column which we would have sold to Lincoln Park, assuming the purchase price in the adjacent column. The numerator is based on the number of shares issuable under the Purchase Agreement at the corresponding assumed purchase price set forth in the adjacent column.

(3)
The closing sale price of our shares on September 11, 2018.

TABLE OF CONTENTS

PLAN OF DISTRIBUTION

The common stock offered by this prospectus is being offered by the selling stockholder, Lincoln Park. The common stock may be sold or distributed from time to time by the selling stockholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock offered by this prospectus could be effected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers, or underwriters who may act solely as agents
- "at the market" into an existing market for the common stock;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the state's registration or qualification requirement is available and complied with.

Lincoln Park is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act.

Lincoln Park has informed us that it intends to use an unaffiliated broker-dealer to effectuate all sales, if any, of the common stock that it may purchase from us pursuant to the Purchase Agreement. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such unaffiliated broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Lincoln Park has informed us that each such broker-dealer will receive commissions from Lincoln Park that will not exceed customary brokerage commissions.

Brokers, dealers, underwriters or agents participating in the distribution of the shares as agents may receive compensation in the form of commissions, discounts, or concessions from the selling stockholder and/or purchasers of the common stock for whom the broker-dealers may act as agent. The compensation paid to a particular broker-dealer may be less than or in excess of customary commissions. Neither we nor Lincoln Park can presently estimate the amount of compensation that any agent will receive.

We know of no existing arrangements between Lincoln Park or any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares offered by this prospectus. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters or dealers and any compensation from the selling stockholder, and any other required information.

We will pay the expenses incident to the registration, offering, and sale of the shares to Lincoln Park. We have agreed to indemnify Lincoln Park and certain other persons against certain liabilities in connection with the offering of shares

of common stock offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Lincoln Park has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Lincoln Park specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

TABLE OF CONTENTS

Lincoln Park has represented to us that at no time prior to the Purchase Agreement has Lincoln Park or its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any short sale (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of our common stock or any hedging transaction, which establishes a net short position with respect to our common stock. Lincoln Park agreed that during the term of the Purchase Agreement, it, its agents, representatives or affiliates will not enter into or effect, directly or indirectly, any of the foregoing transactions.

We have advised Lincoln Park that it is required to comply with Regulation M promulgated under the Exchange Act. With certain exceptions, Regulation M precludes the selling stockholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the securities offered by this prospectus.

This offering will terminate on the earlier of (i) termination of the Purchase Agreement or (ii) the date that all shares offered by this prospectus have been sold by Lincoln Park.

Our common stock is quoted on The NASDAQ Capital Market under the symbol “PRPO”.

TABLE OF CONTENTS

LEGAL MATTERS

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

EXPERTS

The consolidated financial statements of Precipio, Inc. (formerly Transgenomic, Inc.) as of and for the years ended December 31, 2017 and 2016 appearing in our Annual Report on Form 10-K filed for the year ended December 31, 2017, have been audited by Marcum LLP, independent registered public accounting firm, to the extent and for the periods 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 have filed with the SEC a registration statement on Form S-1 under the Securities Act that registers the shares of our common stock to be sold in this offering. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules filed as part of the registration statement. For further information with respect to us and our common stock, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, we refer you to the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The reports and other information we file with the SEC can be read and copied at the SEC's Public Reference Room at 100 F Street, NE, Washington D.C. 20549. Copies of these materials can be obtained at prescribed rates from the Public Reference Section of the SEC at the principal offices of the SEC, 100 F Street, NE, Washington D.C. 20549. You may obtain information regarding the operation of the public reference room by calling 1(800) SEC-0330. The SEC also maintains a web site (http://www.sec.gov) that contains reports, proxy and information statements and other information regarding issuers like us that file electronically with the SEC.

We are required to file annual, quarterly and current reports and other information with the SEC under the Securities Exchange Act of 1934, as amended. These periodic reports, proxy statements and other information will be available for inspection and copying at the SEC's public reference room and the web site of the SEC referred to above.

MARKET AND INDUSTRY DATA AND FORECASTS

Market data and certain industry data and forecasts included in this prospectus were obtained from internal company surveys, market research, publicly available information, reports of governmental agencies and industry publications and surveys. We have relied upon industry publications as our primary sources for third-party industry data and forecasts. Industry surveys, publications and forecasts generally state that the information contained therein has been obtained from sources believed to be reliable, but that the accuracy and completeness of such information is not guaranteed. We have not independently verified any of the data from third-party sources, nor have we ascertained the underlying economic assumptions relied upon therein. Similarly, internal surveys, industry forecasts and market research, which we believe to be reliable based upon our management's knowledge of the industry, have not been independently verified. Forecasts are particularly likely to be inaccurate, especially over long periods of time. In addition, we do not know what assumptions regarding general economic growth were used in preparing the forecasts we cite. Statements as to our market position are based on recently available data. While we are not aware of any misstatements regarding our industry data presented herein, our estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under "Risk Factors" in this prospectus. While we believe our internal business research is reliable and market definitions are appropriate, neither such research nor definitions have been verified by any independent source. This prospectus may only be used for the purpose for which it has been published.

TABLE OF CONTENTS

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits included in the registration statement of which this prospectus is a part for further information about us and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

The SEC allows us to "incorporate by reference" information we file with it, which means that we can disclose important information to you by referring you to other documents. The information incorporated by reference is considered to be a part of this prospectus. Information contained in this prospectus supersedes information incorporated by reference that we have filed with the SEC prior to the date of this prospectus.

We incorporate by reference the following documents listed below (excluding any document or portion thereof to the extent such disclosure is furnished and not filed):

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on April 13, 2018;

- Our Quarterly Report on Form 10-Q for the quarter ended March 31 2018, filed with the SEC on May 21, 2018, and our Quarterly Report on Form 10-Q for the quarter ended June 30 2018, filed with the SEC on August 16, 2018;

- Reports on Form 8-K filed with the SEC on September 26, 2018, September 25, 2018, September 13, 2018, August 22, 2018, August 9, 2018, July 18, 2018, July 6, 2018, June 15, 2018, June 4, 2018, May 14, 2018, April 26, 2018, April 23, 2018, March 30, 2018, March 21, 2018, March 14, 2018, February 26, 2018, February 13, 2018, February 9, 2018, January 31, 2018, and June 30, 2017;

- The portions of our definitive proxy statement on Schedule 14A relating to our 2018 Annual Meeting of Stockholders, as filed with the SEC on May 29, 2018 that are deemed "filed" with the SEC under the Exchange Act.

In addition, we hereby incorporate by reference into this prospectus all documents that we file with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act after the effective date of this Registration Statement and before we terminate the offering under this prospectus. These documents include periodic reports, such as annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K (other than current reports or portions thereof furnished under Items 2.02 or 7.01 of Form 8-K, unless specifically incorporated herein), as well as proxy statements.

We will provide without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request, a copy of any or all of the foregoing documents which we incorporate by reference in this prospectus (not including exhibits to such documents unless such exhibits are specifically incorporated by reference to such documents). Requests should be directed to:

Precipio, Inc.
4 Science Park
New Haven, CT 06511
(203) 787-7888

A copy of any or all of the foregoing documents which we incorporate by reference in this prospectus may be accessed on our corporate web site at http://www.precipiodx.com (Click the "Investors" link and then the "SEC Filings" link).

TABLE OF CONTENTS

Up to 7,000,000

Common Stock
PROSPECTUS
September 28, 2018