

TRANSGENOMIC INC  
Form 424B3  
February 08, 2016

**Filed Pursuant to Rule 424(b)(3)**

**Registration No. 333-209111**

## **PROSPECTUS**

**Transgenomic, Inc.**

**7,121,403 Shares of Common Stock**

This prospectus relates to the resale by the investors listed in the section of this prospectus entitled “Selling Stockholders”, or the Selling Stockholders, of up to 7,121,403 shares of our common stock, par value \$0.01 per share, or the Common Stock. The 7,121,403 shares of Common Stock consist of: (i) up to 2,365,243 shares of Common Stock, or the Conversion Shares, issuable upon conversion of outstanding shares of our Series A-1 Convertible Preferred Stock, par value \$0.01 per share, or the Series A-1 Preferred, (ii) up to 2,873,765 shares of Common Stock issuable upon exercise or exchange of outstanding warrants to purchase shares of Common Stock, or the Placement Warrants, and (iii) up to 1,882,395 shares of Common Stock issuable upon exercise or exchange of an outstanding amended warrant to purchase shares of Common Stock, or the Amended Warrant. The Amended Warrant was an amendment and restatement of that certain Series A Warrant to purchase up to an aggregate of 1,161,972 shares of Common Stock previously issued by us to one of the Selling Stockholders on July 7, 2015. The Amended Warrant amended and restated the original Series A Warrant to provide that the Amended Warrant is subject to the same terms and conditions as the Placement Warrants. The Placement Warrants and the Amended Warrant are collectively referred to herein as the Warrants. The Warrants are immediately exercisable, have a term of five years and have an exercise price of \$1.21 per share of Common Stock. Each of the Warrants is subject to a blocker provision, or the Warrant Blocker, which restricts the exercise of the Warrant if, as a result of such exercise, the Warrant holder, together with its affiliates and any other person whose beneficial ownership of Common Stock would be aggregated with the Warrant holder’s for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, would beneficially own in excess of 9.99% of our then issued and outstanding shares of Common Stock (including the shares of Common Stock issuable upon such exercise), as such percentage ownership is determined in accordance with the terms of the Warrants.

Each Placement Warrant contains an exchange feature, or the Exchange Right, whereby the Placement Warrant holder may exchange all or any portion of the Placement Warrant for a number of shares of Common Stock equal to the quotient obtained by dividing the “Exchange Amount” by the closing bid price of our Common Stock on the second trading day prior to the date the Placement Warrant is exchanged, or the Exchange Price. Under the Placement Warrants, the “Exchange Amount” is based upon a Black Scholes option pricing model, and the aggregate Exchange Amount under all of the Placement Warrants is \$1,436,882, subject to adjustment to the extent that the risk-free U.S. Treasury rate fluctuates between the date of issuance of the Placement Warrants and the date the Placement Warrants are exchanged. Additionally, each Placement Warrant provides that, to the extent the closing bid price of the Common

Stock on the second trading day prior to the date the Placement Warrant is exchanged is less than \$0.50, the Exchange Price will be deemed to be equal to \$0.50. Each Placement Warrant further provides that the number of shares that may be issued upon exercise of the Exchange Right is limited to the number of shares that may be purchased pursuant to the terms of the Placement Warrant, unless we have previously obtained stockholder approval or approval from The Nasdaq Stock Market LLC to issue any additional shares of Common Stock pursuant to the Exchange Right, or the Placement Warrants Required Approvals. Pursuant to the terms of the Placement Warrants, if the Placement Warrants Required Approvals are obtained, the aggregate maximum number of shares of Common Stock issuable pursuant to the Exchange Right in the Placement Warrants is 2,873,765, subject to adjustment to the extent that the risk-free U.S. Treasury rate fluctuates between the date of issuance of the Placement Warrants and the date the Placement Warrants are exchanged.

The Amended Warrant provides that no shares of Common Stock may be issued upon exercise or exchange of the Amended Warrant unless we have previously obtained stockholder approval or approval from The Nasdaq Stock Market LLC to issue any shares of Common Stock upon exercise or exchange of the Amended Warrant, or the Amended Warrant Required Approvals. In addition, the Amended Warrant also contains an Exchange Right whereby the Exchange Amount for the Amended Warrant is based on a Black Scholes option pricing model and is \$941,197, subject to adjustment to the extent that the risk-free U.S. treasury rate fluctuates between the date of issuance of the Amended Warrant and the date the Amended Warrant is exchanged. The Amended Warrant provides that, to the extent the closing bid price of our Common Stock on the second trading day prior to the date the Amended Warrant is exchanged is less than \$0.50, the Exchange Price for the Amended Warrant will be deemed to be equal to \$0.50. If the Amended Warrant Required Approvals are obtained, the maximum number of shares of Common Stock issuable pursuant to the Exchange Right in the Amended Warrant is 1,882,395, subject to adjustment to the extent that the risk-free U.S. treasury rate fluctuates between the date of issuance of the Amended Warrant and the date the Amended Warrant is exchanged.

We issued the shares of Series A-1 Preferred and the Warrants in connection with a private placement offering in January 2016. We are registering the resale of the Conversion Shares and the shares of Common Stock underlying the Warrants, or the Warrant Shares, as required by the Registration Rights Agreement we entered into with the Selling Stockholders on January 8, 2016. The Conversion Shares and the Warrant Shares are sometimes referred to in this prospectus, together, as the Securities.

Our registration of the Securities covered by this prospectus does not mean that the Selling Stockholders will offer or sell any of the Securities. The Selling Stockholders may sell the Securities covered by this prospectus in a number of different ways and at varying prices. For additional information on the possible methods of sale that may be used by the Selling Stockholders, you should refer to the section of this prospectus entitled “Plan of Distribution” beginning on page 8 of this prospectus. We will not receive any of the proceeds from the Securities sold by the Selling Stockholders, other than any proceeds from the cash exercise of Warrants to purchase shares of Common Stock.

No underwriter or other person has been engaged to facilitate the sale of the Securities in this offering. The Selling Stockholders may be deemed underwriters of the Securities that they are offering. We will bear all costs, expenses and fees in connection with the registration of the Securities. The Selling Stockholders will bear all commissions and discounts, if any, attributable to their respective sales of the Securities.

You should read this prospectus, any applicable prospectus supplement and any related free writing prospectus carefully before you invest.

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

Our Common Stock is currently listed on the NASDAQ Capital Market under the symbol “TBIO”. On February 5, 2016, the last reported sales price for our Common Stock was \$0.678 per share.

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

The date of this prospectus is February 8, 2016.

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**ABOUT THIS PROSPECTUS**

You should rely only on the information we have provided or incorporated by reference into this prospectus, any applicable prospectus supplement and any related free writing prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the shares of Common Stock offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

The Selling Stockholders are offering the Securities only in jurisdictions where such issuances are permitted. The distribution of this prospectus and the issuance of the Securities in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the issuance of the Securities and the distribution of this prospectus outside the United States. This prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, the Securities offered by this prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, under which the Selling Stockholders may offer from time to time up to an aggregate of 7,121,403 shares of our Common Stock in one or more offerings. If required, each time a Selling Stockholder offers Common Stock, in addition to this prospectus, we will provide you with a prospectus supplement that will contain specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to that offering. We may also use a prospectus supplement and any related free writing prospectus to add, update or change any of the information contained in this prospectus or in documents we have incorporated by reference. This prospectus, together with any applicable prospectus supplements, any related free writing prospectuses and the documents incorporated by reference into this prospectus, includes all material information relating to this offering. To the extent that any statement that we make in a prospectus supplement is inconsistent with statements made in this prospectus, the statements made in this prospectus will be deemed modified or superseded by those made in a prospectus supplement. Please carefully read both this prospectus and any prospectus supplement together with the additional information described below under “Important Information Incorporated by Reference”.

## SUMMARY

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

### **Transgenomic, Inc.**

We are a global biotechnology company advancing personalized medicine in cardiology, oncology and inherited diseases through advanced diagnostic technologies, such as our revolutionary multiplexed ICE COLD-PCR™, or MX-ICP, technology and our unique genetic tests provided through our Laboratory Services business. We also provide specialized clinical and research services to biopharmaceutical companies developing targeted therapies. Our diagnostic technologies are designed to improve medical diagnoses and patient outcomes. Our strategy seeks to optimize, through channel partnerships, the commercial potential of our assets aimed at large genetic testing markets. This allows us to focus resources on our areas of strength, including developing and marketing tests for rare genetic disorders and other genetic-mediated conditions in the U.S., where we are a market leader, and developing biomarkers, genetic tests and companion diagnostics using proprietary technology that is unsurpassed for the identification and detection of low-level genetic mutations and is a prerequisite for improved diagnosis and treatment of cancer and other diseases.

MX-ICP is a simple, proprietary technology that amplifies the ability to detect genetic mutations by 100 - 400 fold. This technology has been validated internally on all currently available sequencing platforms, including Sanger, Next Gen Sequencing and Digital PCR. By enhancing the level of detection of genetic mutations and suppressing the normal, “wild-type” DNA, several benefits are provided. It is generally understood that most current technologies are unable to consistently identify mutations that occur in less than approximately 5% of a sample. However, many mutations found at much lower levels, even down to 0.01%, are known to be clinically relevant and can have significant consequences to a patient: both in terms of how they will respond to a given drug or treatment and how a given tumor is likely to change over time. More importantly, in our view, significantly improving the level of detection while using blood, saliva and even urine as a source for DNA, rather than depending on painful, expensive and potentially dangerous tumor biopsies, is an important advancement in patient care with respect to cancer detection, treatment and monitoring and can result in significant cost savings for the healthcare system by replacing invasive procedures with the simple collection of blood or other bodily fluids. By broadening the types of samples that

can be used for testing and allowing all sequencing platforms to provide improved identification of low level mutations, MX-ICP has the potential to make testing more patient friendly, enable genetic monitoring of disease progression, effectively guide treatment protocols, and reduce the overall cost of diagnosis and monitoring while improving patient outcomes.

Our operations are organized as one business segment, our Laboratory Services segment. Our laboratories specialize in genetic testing for cardiology, neurology and mitochondrial disorders, and for oncology. Our Patient Testing laboratories located in New Haven, Connecticut and Omaha, Nebraska are certified under the Clinical Laboratory Improvement Amendment as high complexity laboratories and our Omaha facility is accredited by the College of American Pathologists. Our Biomarker Identification laboratory located in Omaha provides pharmacogenomics research services supporting Phase II and Phase III clinical trials conducted by pharmaceutical and biotechnology companies. Our laboratories employ a variety of genomic testing service technologies, including our new, high performance MX-ICP technology. ICE COLD-PCR is a proprietary ultra-high sensitivity platform technology with breakthrough potential to enable wide adoption of personalized, precision medicine in cancer and other diseases. It can be run in any laboratory that contains standard PCR systems. MX-ICP enables detection of multiple known and unknown mutations from virtually any sample type, including tissue biopsies, blood, urine, saliva, cell-free DNA and circulating tumor cells at levels greater than 1,000-fold higher than standard DNA sequencing techniques. It is easy to implement and use within existing workflows.

For a complete description of our business, financial condition, results of operations and other important information, we refer you to our filings with the Securities and Exchange Commission, or the SEC, that are incorporated by reference in this prospectus, including our Annual Report on Form 10-K for the year ended December 31, 2014. For instructions on how to find copies of these documents, see “Where You Can Find More Information”.

We were incorporated in Delaware on March 6, 1997. Our principal office is located at 12325 Emmet Street, Omaha, Nebraska 68164 and our telephone number is 402-452-5400. Our website address is [www.transgenomic.com](http://www.transgenomic.com). Information on our website, or that can be accessed through our website, is not incorporated by reference into this prospectus and does not constitute part of this prospectus.

## **RISK FACTORS**

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





## DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

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

You should read this prospectus and the documents incorporated by reference completely and with the understanding that our actual future results may be materially different from what we currently expect. Our business and operations are and will be subject to a variety of risks, uncertainties and other factors. Consequently, actual results and experience may materially differ from those contained in any forward-looking statements. Such risks, uncertainties and other factors that could cause actual results and experience to differ from those projected include, but are not limited to, the risk factors set forth in Part I - Item 1A, “Risk Factors”, in our Annual Report on Form 10-K for the year ended December 31, 2014, as filed with the SEC on April 15, 2015, and elsewhere in the documents incorporated by reference into this prospectus.

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

## USE OF PROCEEDS

We will receive no proceeds from the sale of the Securities by the Selling Stockholders. We may, however, receive cash proceeds equal to the total exercise price of any Warrants to the extent that the Warrants are exercised for cash. The exercise price of the Warrants held by the Selling Stockholders is \$1.21 per share of Common Stock. The exercise price and the number of shares of Common Stock issuable upon exercise of the Warrants may be adjusted in certain circumstances, including stock splits, dividends or distributions, and mergers, consolidations, a sale of all or substantially all of our assets, an exchange offer, a business combination or other similar transactions. However, these Warrants contain a “cashless exercise” feature that allows the holders, under certain circumstances, to exercise the Warrants without making a cash payment to us. Additionally, each of the Placement Warrants and the Amended Warrant contain the Exchange Right, whereby the Warrant holder may exchange all or any portion of the Placement Warrant or the Amended Warrant, as applicable, for a number of shares of Common Stock equal to the quotient obtained by dividing the applicable Exchange Amount by the closing bid price of our Common Stock on the second trading day prior to the date the applicable Warrant is exchanged. There can be no assurance that any of these Warrants will be exercised by the Selling Stockholders at all or that these Warrants will be exercised for cash rather than pursuant to the “cashless exercise” feature or the Exchange Right. To the extent we receive proceeds from the cash exercise of the Warrants, we intend to use such proceeds to provide capital support or for general corporate purposes, which may include, without limitation, supporting asset growth and engaging in acquisitions or other business combinations. We do not have any specific plans for acquisitions or other business combinations at this time. Our management will retain broad discretion in the allocation of the net proceeds from the exercise of the Warrants.

The Selling Stockholders will pay any underwriting discounts and commissions and any similar expenses they incur in disposing of the Securities. We will bear all other costs, fees and expenses incurred in effecting the registration of the Securities covered by this prospectus. These may include, without limitation, all registration and filing fees, printing fees and fees and expenses of our counsel and accountants.

## SELLING STOCKHOLDERS

We have prepared this prospectus to allow the Selling Stockholders or their successors, assignees or other permitted transferees to sell or otherwise dispose of, from time to time, up to 7,121,403 shares of our Common Stock. The 7,121,403 shares of Common Stock consist of: (i) up to 2,365,243 shares of Common Stock issuable upon conversion of our outstanding shares of Series A-1 Preferred issued pursuant to the Securities Purchase Agreement, dated January 6, 2016, by and among the Company and affiliates of the Selling Stockholders, or the Securities Purchase Agreement, (ii) up to 2,873,765 shares of Common Stock issuable upon exercise or exchange of the Placement Warrants issued pursuant to the Securities Purchase Agreement, and (iii) up to 1,882,395 shares of Common Stock issuable upon exercise or exchange of the Amended Warrant issued pursuant to the Securities Purchase Agreement. These Securities were issued in reliance on the exemption from securities registration in Section 4(a)(2) under the Securities Act and Rule 506 promulgated thereunder. Each Placement Warrant (i) has an exercise price of \$1.21 per share of Common Stock and became exercisable upon issuance, (ii) became exchangeable pursuant to the Exchange Right upon issuance, subject to receipt of the Placement Warrants Required Approvals to the extent the shares issuable upon exercise of the Exchange Right are greater than the number of shares issuable upon exercise of a Placement Warrant, and (iii) will be exercisable or exchangeable through January 8, 2021. The Amended Warrant (i) has an exercise price of \$1.21 per share of Common Stock and provides that no shares of Common Stock may be issued upon exercise or exchange of the Amended Warrant unless the Amended Warrant Required Approvals have been obtained, and (ii) subject to obtaining the Amended Warrant Required Approvals, will be exercisable or exchangeable through January 8, 2021. The exercisability or exchangeability of all of the Warrants is subject to the Warrant Blocker, which will automatically expire 61 calendar days prior to the expiration date of the applicable Warrant.

The shares of Common Stock to be offered by the Selling Stockholders are “restricted” securities under applicable federal and state securities laws and are being registered under the Securities Act to give the Selling Stockholders the opportunity to sell these shares publicly. The registration of these shares does not require that any of the shares be offered or sold by the Selling Stockholders. Subject to these resale restrictions, the Selling Stockholders may from time to time offer and sell all or a portion of their shares indicated below in privately negotiated transactions or on the NASDAQ Capital Market or any other market on which our Common Stock may subsequently be listed.

The registered shares may be sold directly or through brokers or dealers, or in a distribution by one or more underwriters on a firm commitment or best effort basis. To the extent required, the names of any agent or broker-dealer and applicable commissions or discounts and any other required information with respect to any particular offering will be set forth in a prospectus supplement. See the section of this prospectus entitled “Plan of Distribution”. The Selling Stockholders and any agents or broker-dealers that participate with the Selling Stockholders in the distribution of registered shares may be deemed to be “underwriters” within the meaning of the Securities Act, and any commissions received by them and any profit on the resale of the registered shares may be deemed to be underwriting commissions or discounts under the Securities Act.

No estimate can be given as to the amount or percentage of Common Stock that will be held by the Selling Stockholders after any sales made pursuant to this prospectus because the Selling Stockholders are not required to sell any of the Securities being registered under this prospectus. The following table assumes that the Selling Stockholders will sell all of the Securities listed in this prospectus.

Unless otherwise indicated in the footnotes below, no Selling Stockholder has had any material relationship with us or any of our affiliates within the past three years other than as a security holder.

We have prepared this table based on written representations and information furnished to us by or on behalf of the Selling Stockholders. Since the date on which the Selling Stockholders provided this information, the Selling Stockholders may have sold, transferred or otherwise disposed of all or a portion of the shares of Common Stock in a transaction exempt from the registration requirements of the Securities Act. Unless otherwise indicated in the footnotes below, we believe that: (1) none of the Selling Stockholders are broker-dealers or affiliates of broker-dealers, (2) no Selling Stockholder has direct or indirect agreements or understandings with any person to distribute their Securities, and (3) the Selling Stockholders have sole voting and investment power with respect to all Securities beneficially owned, subject to applicable community property laws. To the extent any Selling Stockholder identified below is, or is affiliated with, a broker-dealer, it could be deemed to be, under SEC Staff interpretations, an “underwriter” within the meaning of the Securities Act. Information about the Selling Stockholders may change over time. Any changed information will be set forth in supplements to this prospectus, if required.

The following table sets forth information with respect to the beneficial ownership of our Common Stock held, as of January 8, 2016, by the Selling Stockholders and the number of Securities being offered hereby and information with respect to shares to be beneficially owned by the Selling Stockholders after completion of this offering. The percentages in the following table reflect the shares beneficially owned by the Selling Stockholders as a percentage of the total number of shares of Common Stock outstanding as of January 8, 2016. As of such date, 20,695,870 shares of Common Stock were outstanding.

Name	Shares Beneficially Owned Prior to the Offering <sup>(1)</sup>			Maximum Number of Shares of Common Stock to be Offered Pursuant to this Prospectus	Shares Beneficially Owned After the Offering <sup>(2)</sup>		
	Number	Percentage		Number	Number	Percentage	
Crede CG III, Ltd.	8,758,512	(3)	31.3 %	6,645,836	2,112,676	7.5	%
Third Security Senior Staff 2008 LLC	3,481,329	(4)	16.5 %	190,228	3,291,101	15.6	%
Third Security Staff 2010 LLC	2,491,601	(5)	11.8 %	95,113	2,396,488	11.4	%
Third Security Incentive 2010 LLC	1,740,662	(6)	8.3 %	95,113	1,645,549	7.9	%
Third Security Staff 2014 LLC	989,726	(7)	4.8 %	95,113	894,613	4.3	%
TOTAL	17,461,830	—		7,121,403	10,340,427	—	

Beneficial ownership is determined in accordance with Rule 13d-3 under the Exchange Act. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of common stock subject to warrants, options and other convertible securities held by that person that are currently exercisable or exercisable within 60 days (of January 8, 2016) are deemed outstanding. Shares subject to warrants, options and other convertible securities, however, are not deemed outstanding for the purpose of computing the percentage ownership of any other person.

Assumes that the Selling Stockholders dispose of all of the shares of Common Stock covered by this prospectus and do not acquire beneficial ownership of any additional shares. The registration of these shares does not necessarily mean that the Selling Stockholders will sell all or any portion of the shares covered by this prospectus. The number of shares consists of (i) 1,445,512 shares of Common Stock, (ii) 2,150,538 shares of Common Stock issuable upon conversion of 2,150,538 shares of Series A-1 Preferred, which such shares of Common Stock are covered by this prospectus, (iii) 1,612,903 shares of Common Stock issuable upon exercise or exchange of a Placement Warrant that is currently exercisable, except to the extent such exercise is restricted by the Warrant Blocker; however, if the Placement Warrants Required Approvals have been obtained, the Placement Warrant holder may receive an additional 1,000,000 shares of Common Stock upon exercise of the Exchange Right under the Placement Warrant for an aggregate of up to 2,612,903 shares of Common Stock issuable upon exchange of the Placement Warrant, all of which such Warrant Shares are covered by this prospectus, (iv) subject to receipt of the Amended Warrant Required Approvals, 1,161,972 shares of Common Stock issuable upon exercise or exchange of the Amended Warrant that is currently exercisable, except to the extent such exercise is restricted by the Warrant Blocker; however, if the Amended Warrant Required Approvals have been obtained, the Amended Warrant holder may receive an additional 720,423 shares of Common Stock upon exercise of the Exchange Right under the Amended Warrant for an aggregate of up to 1,882,395 shares of Common Stock issuable upon exchange of the Amended Warrant, all of which such Warrant Shares are covered by this prospectus, and (v) 667,164 shares of Common Stock issuable upon exercise of Series B Warrant to purchase shares of Common Stock that is currently exercisable, except to the extent such exercise is restricted by a blocker provision in the Series B Warrant similar to the Warrant Blocker. The Warrant Blocker will automatically expire 61 calendar days prior to the expiration date of the Warrants. The table above includes Warrants that are not currently exercisable because of the Warrant Blocker, the Placement Warrants Required Approvals and the Amended Warrant Required Approvals and which are not deemed to be beneficially owned by Crede CG III, Ltd. The sole stockholder of Crede CG III, Ltd. is Crede Capital Group, LLC. Acuitas Financial Group, LLC holds all of the membership interests of Crede Capital Group,

LLC and Terren Peizer holds all of the membership interests of Acuitas Financial Group, LLC. Voting and dispositive power with respect to the shares held by Crede CG III, Ltd. is exercised by Terren Peizer, the sole and Managing Member of Acuitas Financial Group, LLC and Crede Capital Group, LLC and Managing Director of Crede CG III, Ltd., who acts as investment advisor to these entities. Terren Peizer, Acuitas Financial Group, LLC and Crede Capital Group, LLC disclaim beneficial ownership with respect to the shares held by Crede CG III, Ltd. The business address of Crede Capital Group, LLC is 11601 Wilshire Blvd., Suite 1100, Los Angeles, CA 90025.

The number of shares consists of (i) 3,020,267 shares of Common Stock, (ii) 85,882 shares of Common Stock issuable upon conversion of 85,882 shares of Series A-1 Preferred, which such shares of Common Stock are covered by this prospectus, (iii) 64,411 shares of Common Stock issuable upon exercise or exchange of a Placement Warrant that is currently exercisable, except to the extent such exercise is restricted by the Warrant Blocker; however, if the Placement Warrants Required Approvals have been obtained, Third Security Senior Staff 2008 LLC may receive an additional 39,935 shares of Common Stock upon exercise of the Exchange Right under the Placement Warrant for an aggregate of up to 104,346 shares of Common Stock issuable upon exchange of the Placement Warrant, all of which such Warrant Shares are covered by this prospectus, and (iv) 270,834 shares of Common Stock issuable upon exercise of warrants to purchase Common Stock that are not Placement Warrants and are currently exercisable. The Warrant Blocker will automatically expire 61 calendar days prior to the expiration date of the Placement Warrant. The table above includes a Placement Warrant that is not currently exercisable because of the Warrant Blocker and the Placement Warrants Required Approvals and which is not deemed to be beneficially owned by Third Security Senior Staff 2008 LLC. Third Security Senior Staff 2008 LLC is managed by Third Security, LLC (“Third Security”), which is managed by Mr. Randal J. Kirk. Mr. Randal J. Kirk could be deemed to have indirect beneficial ownership of these shares. The business address of Third Security Senior Staff 2008 LLC is 1881 Grove Avenue, Radford, Virginia 24141. We are party to that certain Loan and Security Agreement (Term Loan and Revolving Loan), dated as of March 13, 2013, as amended (the “Loan and Security Agreement”), with affiliates of Third Security. Additionally, Doit L. Koppler II, a director of the Company, is an employee of Third Security and Robert Patzig, a director of the Company, is a former employee of Third Security.

(4) The number of shares consists of (i) 2,125,654 shares of Common Stock, (ii) 42,941 shares of Common Stock issuable upon conversion of 42,941 shares of Series A-1 Preferred, which such shares of Common Stock are covered by this prospectus, (iii) 32,205 shares of Common Stock issuable upon exercise or exchange of a Placement Warrant that is currently exercisable, except to the extent such exercise is restricted by the Warrant Blocker; however, if the Placement Warrants Required Approvals have been obtained, Third Security Staff 2010 LLC may receive an additional 19,967 shares of Common Stock upon exercise of the Exchange Right under the Placement Warrant for an aggregate of up to 52,172 shares of Common Stock issuable upon exchange of the Placement Warrant, all of which such Warrant Shares are covered by this prospectus, and (iv) 270,834 shares of Common Stock issuable upon exercise of warrants to purchase Common Stock that are not Placement Warrants and are currently exercisable. The Warrant Blocker will automatically expire 61 calendar days prior to the expiration date of the Placement Warrant. The table above includes a Placement Warrant that is not currently exercisable because of the Warrant Blocker and the Placement Warrants Required Approvals and which is not deemed to be beneficially owned by Third Security Staff 2010 LLC. Third Security Staff 2010 LLC is managed by Third Security, which is managed by Mr. Randal J. Kirk. Mr. Randal J. Kirk could be deemed to have indirect beneficial ownership of these shares. The business address of Third Security Staff 2010 LLC is 1881 Grove Avenue, Radford, Virginia 24141. We are party to the Loan and Security Agreement with affiliates of Third Security. Additionally, Doit L. Koppler II, a director of the Company, is an employee of Third Security and Robert Patzig, a director of the Company, is a former employee of Third Security.

(5) The number of shares consists of (i) 1,510,135 shares of Common Stock, (ii) 42,941 shares of Common Stock issuable upon conversion of 42,941 shares of Series A-1 Preferred, which such shares of Common Stock are covered by this prospectus, (iii) 32,205 shares of Common Stock issuable upon exercise or exchange of a Placement Warrant that is currently exercisable, except to the extent such exercise is restricted by the Warrant Blocker; however, if the Placement Warrants Required Approvals have been obtained, Third Security Incentive 2010 LLC may receive an additional 19,967 shares of Common Stock upon exercise of the Exchange Right under the Placement Warrant for an aggregate of up to 52,172 shares of Common Stock issuable upon exchange of the Placement Warrant, all of which such Warrant Shares are covered by this prospectus, and (iv) 135,414 shares of Common Stock issuable upon exercise of warrants to purchase Common Stock that are not Placement Warrants



and are currently exercisable. The Warrant Blocker will automatically expire 61 calendar days prior to the expiration date of the Placement Warrant. The table above includes a Placement Warrant that is not currently exercisable because of the Warrant Blocker and the Placement Warrants Required Approvals and which is not deemed to be beneficially owned by Third Security Incentive 2010 LLC. Third Security Incentive 2010 LLC is managed by Third Security, which is managed by Mr. Randal J. Kirk. Mr. Randal J. Kirk could be deemed to have indirect beneficial ownership of these shares. The business address of Third Security Incentive 2010 LLC is 1881 Grove Avenue, Radford, Virginia 24141. We are party to the Loan and Security Agreement with affiliates of Third Security. Additionally, Doit L. Koppler II, a director of the Company, is an employee of Third Security and Robert Patzig, a director of the Company, is a former employee of Third Security.

The number of shares consists of (i) 894,613 shares of Common Stock, (ii) 42,941 shares of Common Stock issuable upon conversion of 42,941 shares of Series A-1 Preferred, which such shares of Common Stock are covered by this prospectus, and (iii) 32,205 shares of Common Stock issuable upon exercise or exchange of a Placement Warrant that is currently exercisable, except to the extent such exercise is restricted by the Warrant Blocker; however, if the Placement Warrants Required Approvals have been obtained, Third Security Staff 2014 LLC may receive an additional 19,967 shares of Common Stock upon exercise of the Exchange Right under the Placement Warrant for an aggregate of up to 52,172 shares of Common Stock issuable upon exchange of the Placement Warrant, all of which such Warrant Shares are covered by this prospectus. The Warrant Blocker will (7) automatically expire 61 calendar days prior to the expiration date of the Placement Warrant. The table above includes a Placement Warrant that is not currently exercisable because of the Warrant Blocker and the Placement Warrants Required Approvals and which is not deemed to be beneficially owned by Third Security Staff 2014 LLC. Third Security Staff 2014 LLC is managed by Third Security, which is managed by Mr. Randal J. Kirk. Mr. Randal J. Kirk could be deemed to have indirect beneficial ownership of these shares. The business address of Third Security Staff 2014 LLC is 1881 Grove Avenue, Radford, Virginia 24141. We are party to the Loan and Security Agreement with affiliates of Third Security. Additionally, Doit L. Koppler II, a director of the Company, is an employee of Third Security and Robert Patzig, a director of the Company, is a former employee of Third Security.

## **Indemnification**

Under the Registration Rights Agreement, we have agreed to indemnify the Selling Stockholders and each underwriter of the Securities against certain losses, claims, damages, liabilities, settlement costs and expenses, including liabilities under the Securities Act.

## PLAN OF DISTRIBUTION

We are registering the shares of common stock previously issued to the Selling Stockholders and issuable upon exercise or exchange of the warrants and upon conversion of the Series A-1 Preferred previously issued to the Selling Stockholders to permit the resale of these shares of common stock by the holders of the common stock, warrants and Series A-1 Preferred from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the Selling Stockholders of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The Selling Stockholders may sell all or a portion of the shares of common stock beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the Selling Stockholders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. The Selling Stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. These sales may be effected in transactions, which may involve crosses or block transactions:

· on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;

· in the over-the-counter market;

- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing of options, whether such options are listed on an options exchange or otherwise;
- in ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

· in block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

- through purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

in an exchange distribution in accordance with the rules of the applicable exchange;

in privately negotiated transactions;

in short sales;

through the distribution of the common stock by any Selling Stockholder to its partners, members or stockholders;

through one or more underwritten offerings on a firm commitment or best efforts basis;

in sales pursuant to Rule 144;

whereby broker-dealers may agree with the Selling Stockholders to sell a specified number of such shares at a stipulated price per share;

in a combination of any such methods of sale; and

in any other method permitted pursuant to applicable law.

If the Selling Stockholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the Selling Stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the Selling Stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The Selling Stockholders may also sell shares of common stock short and deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The Selling Stockholders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

The Selling Stockholders may pledge or grant a security interest in some or all of the shares of common stock, warrants or Series A-1 Preferred owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of Selling Stockholders to include the pledgee, transferee or other successors in interest as Selling Stockholders under this prospectus. The Selling Stockholders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The Selling Stockholders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be “underwriters” within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of common stock is made, a prospectus supplement, if required, will be distributed which will set forth the aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the Selling Stockholders and any discounts, commissions or concessions allowed or reallocated or paid to broker-dealers. The Selling Stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares of common stock against certain liabilities, including liabilities arising under the Securities Act.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any Selling Stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The Selling Stockholders and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including, without limitation, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the Selling Stockholders and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We will pay all expenses of the registration of the shares of common stock pursuant to the registration rights agreement, estimated to be \$35,524 in total, including, without limitation, SEC filing fees and expenses of compliance with state securities or “Blue Sky” laws; provided, however, that a Selling Stockholder will pay all underwriting discounts and selling commissions, if any. We will indemnify the Selling Stockholders against liabilities, including some liabilities under the Securities Act, in accordance with the registration rights agreement, or the Selling Stockholders will be entitled to contribution. We may be indemnified by the Selling Stockholders against civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the Selling Stockholder specifically for use in this prospectus, in accordance with the registration rights agreement, or we may be entitled to contribution.

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

## **DESCRIPTION OF CAPITAL STOCK**

### **General Matters**

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

### **Common Stock**

As of January 8, 2016, 20,695,870 shares of Common Stock were issued and outstanding, held by approximately 77 stockholders of record, not including beneficial holders whose shares are held in names other than their own.

### ***Dividends, Voting Rights and Liquidation***

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

### **Preferred Stock**

### ***General Matters***

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

Of the number of shares of Preferred Stock authorized by our Certificate of Incorporation, as of January 8, 2016 (i) 3,879,307 shares had been designated Series A Convertible Preferred Stock with such rights, privileges and preferences as set forth in the Certificate of Amendment of Certificate of Designation of Series A Convertible Preferred Stock filed with the Secretary of State of the State of Delaware on March 5, 2014, (ii) 1,443,297 shares had been designated Series B Convertible Preferred Stock with such rights, privileges and preferences as set forth in the Certificate of Designation of Series B Convertible Preferred Stock filed with the Secretary of State of the State of Delaware on March 5, 2014, and (iii) 2,365,243 shares had been designated Series A-1 Preferred with such rights, privileges and preferences as set forth in the Certificate of Designation of Series A-1 Convertible Preferred Stock filed with the Secretary of State of the State of Delaware on January 8, 2016. As of January 8, 2016, no shares of the Series A Convertible Preferred Stock or the Series B Convertible Preferred Stock were outstanding and 2,365,243 shares of Series A-1 Preferred were issued and outstanding.

### *Dividends, Voting Rights and Liquidation*

Certain rights of the holders of the Series A-1 Preferred are senior to the rights of the holders of our Common Stock. The Series A-1 Preferred has a liquidation preference equal to its original price per share, plus any accrued and unpaid dividends thereon.

All outstanding shares of Series A-1 Preferred will be automatically converted into Common Stock, at an initial conversion rate of 1:1, at the election of the holders of a majority of the then-outstanding shares of Series A-1 Preferred, voting as a single class on an as-converted basis. The initial conversion rate for the Series A-1 Preferred is subject to adjustment in the event of certain stock splits, stock dividends, mergers, reorganizations and reclassifications.

Generally, the holders of the Series A-1 Preferred are entitled to vote as a single voting group with the holders of the Common Stock, and the holders of the Series A-1 Preferred are generally entitled to that number of votes as is equal to the product obtained by multiplying: (i) the number of whole shares of Common Stock into which the Series A-1 Preferred may be converted as of the record date of such vote or consent, by (ii) 0.93, rounded down to the nearest whole number. Initially, every 1.075269 shares of Series A-1 Preferred will generally be entitled to one vote.





### **Anti-Takeover Effects Under Section 203 of the General Corporation Law of the State of Delaware**

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

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

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

on or after such date, the business combination is approved by the board of directors and authorized at an annual or a special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66<sup>2</sup>/<sub>3</sub>% of the outstanding voting stock that is not owned by the interested stockholder.

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

any merger or consolidation involving the corporation or any direct or indirect majority owned subsidiary of the corporation and the interested stockholder or any other corporation, partnership, unincorporated association, or other entity if the merger or consolidation is caused by the interested stockholder and as a result of such merger or consolidation the transaction is not excepted as described above;

any sale, transfer, pledge, or other disposition (in one transaction or a series) of 10% or more of the assets of the corporation involving the interested stockholder;

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

any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or

the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges, or other financial benefits by or through the corporation.

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

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

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

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

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

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

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

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

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

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

## **Warrants**

In addition to the shares subject to the Warrants that we are registering hereunder, as of January 8, 2016, warrants to purchase 5,918,004 shares of Common Stock with a weighted-average exercise price of \$2.70 per share were outstanding, some of which are subject to a provision that is similar to the Warrant Blocker, and all of the shares subject to the warrants are currently exercisable, except for a warrant to purchase 107,527 shares of common stock, which will become exercisable on July 8, 2016. Each Placement Warrant (i) has an exercise price of \$1.21 per share of Common Stock and became exercisable upon issuance, (ii) became exchangeable pursuant to the Exchange Right upon issuance, subject to receipt of the Placement Warrants Required Approvals to the extent the shares issuable upon exercise of the Exchange Right are greater than the number of shares issuable upon exercise of a Placement Warrant, and (iii) will be exercisable or exchangeable through January 8, 2021. The Amended Warrant (A) has an exercise price of \$1.21 per share of Common Stock and provides that no shares of Common Stock may be issued upon exercise or exchange of the Amended Warrant unless the Amended Warrant Required Approvals have been obtained, and (B) subject to obtaining the Amended Warrant Required Approvals, will be exercisable or exchangeable through January 8, 2021. The exercisability or exchangeability of all of the Warrants is subject to the Warrant Blocker, which will automatically expire 61 calendar days prior to January 8, 2021, the expiration date of the Warrants. Each of the Placement Warrants and the Amended Warrant includes both cash and “cashless exercise” features. For any Exchange Right under the Placement Warrants exercised more than 90 days following the issuance of the Placement Warrants, if we have not obtained the Placement Warrants Required Approvals, we will be required to pay the Placement Warrant

holder an amount in cash for the shares of Common Stock that we cannot issue under the Placement Warrant pursuant to such exercise without the Placement Warrants Required Approvals based on the applicable Exchange Amount. Each Placement Warrant further provides that, to the extent the closing bid price of our Common Stock on the second trading day prior to the date the Placement Warrant is exchanged is less than \$0.50, the Exchange Price for the Placement Warrant will be deemed to be equal to \$0.50, and, in addition to issuing shares of Common Stock based on this Exchange Price, we will be required to pay to the Placement Warrant holder an amount in cash equal to the product obtained by multiplying (i) \$0.50 minus the closing bid price of our Common Stock on the second trading day prior to the date the Placement Warrant is exchanged, by (ii) the aggregate number of shares of Common Stock issued to the Placement Warrant holder by us in such exchange at an Exchange Price equal to \$0.50.

Pursuant to the terms of the Amended Warrant, in the event the Amended Warrant holder exercises the Exchange Right under the Amended Warrant more than 90 days following the issuance of the Amended Warrant, if we have not obtained the Amended Warrant Required Approvals, we will be required to pay to the Amended Warrant holder an amount in cash for the shares of Common Stock that we cannot issue under the Amended Warrant pursuant to such exercise without the Amended Warrant Required Approvals based on the applicable Exchange Amount. The Amended Warrant also provides that, to the extent the closing bid price of our Common Stock on the second trading day prior to the date the Amended Warrant is exchanged is less than \$0.50, the Exchange Price for the Amended Warrant will be deemed to be equal to \$0.50, and, in addition to issuing shares of Common Stock based on this Exchange Price (assuming receipt of the Amended Warrant Required Approvals), we will be required to pay to the Amended Warrant holder an amount in cash equal to the product obtained by multiplying (i) \$0.50 minus the closing bid price of our Common Stock on the second trading day prior to the date the Amended Warrant is exchanged, by (ii) the aggregate number of shares of Common Stock issued to the Amended Warrant holder by us in such exchange at an Exchange Price equal to \$0.50.

We are registering all of the underlying shares of Common Stock issuable upon exercise or exchange of the Warrants pursuant to the registration statement of which this prospectus forms a part. All of our other outstanding warrants are currently exercisable, and all outstanding warrants contain provisions for the adjustment of the exercise price in the event of stock dividends, stock splits, reorganizations, reclassifications or mergers. In addition, certain of the warrants contain a “cashless exercise” feature that allows the holders thereof to exercise the warrants without a cash payment to us under certain circumstances.

## Unsecured Convertible Promissory Notes

Pursuant to the terms of an Unsecured Convertible Promissory Note Purchase Agreement, or the Note Purchase Agreement, dated December 31, 2014, by and among us and certain accredited investors, we issued and sold, in a private placement, unsecured convertible promissory notes, or the Notes, in the aggregate principal amount of \$1,675,000. In accordance with the terms of the Notes, the outstanding principal and unpaid interest accrued under each Note is convertible into shares of Common Stock as follows: (i) commencing upon the date of issuance of the Note (but no earlier than January 1, 2015), the investor holding such Note became entitled to convert, on a one-time basis, up to 50% of the outstanding principal and unpaid interest accrued under the Note, into shares of Common Stock at a conversion price equal to the lesser of (a) the average closing price of our Common Stock on the principal securities exchange or securities market on which our Common Stock is then traded, or the Market, for the 20 consecutive trading days immediately preceding the date of conversion, and (b) \$2.20 (subject to adjustment for stock splits, stock dividends, other distributions, recapitalizations and the like); and (ii) commencing February 15, 2015, the investor holding such Note became entitled to convert, on a one-time basis, any or all of the remaining outstanding principal and unpaid interest accrued under the Note, into shares of Common Stock at a conversion price equal to 85% of the average closing price of our Common Stock on the Market for the 15 consecutive trading days immediately preceding the date of conversion. As of the date of this prospectus, Notes in an aggregate principal amount of \$1,150,000 have been converted into 783,809 shares of Common Stock, and Notes in an aggregate principal amount of \$525,000 remain outstanding. Craig-Hallum acted as the sole placement agent for the convertible notes offering. In connection with the convertible notes offering, we issued to Craig-Hallum a convertible promissory note on the same terms and conditions as the Notes, in an aggregate principal amount of \$46,250, which is outstanding as of the date of this prospectus.

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

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

**Listing**

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

**Transfer Agent and Registrar**

The transfer agent anT: 0pt; DISPLAY: block; MARGIN-LEFT: 0pt; MARGIN-RIGHT: 0pt" align="center">12

CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

o

13

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

10.4%

14

TYPE OF REPORTING PERSON

IN

\_\_\_\_\_

1 Mr. Smith beneficially owns 3,132 Shares underlying certain options exercisable within 60 days.

7

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CUSIP NO. 868873100

1 NAME OF REPORTING PERSON

MARK MITCHELL

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)   
(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

OO

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

USA

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER
		- 0 -
	8	SHARED VOTING POWER
		1,812,700
	9	SOLE DISPOSITIVE POWER
		- 0 -
	10	SHARED DISPOSITIVE POWER
		1,812,700

11 AGGREGATE AMOUNT BENFICIALLY OWNED BY EACH REPROTING PERSON

1,812,700

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

10.3%

14 TYPE OF REPORTING PERSON

IN



CUSIP NO. 868873100

1 NAME OF REPORTING PERSON

PETER A. FELD

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a)   
(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS

OO

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

USA

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER
	8	- 0 - SHARED VOTING POWER
	9	1,812,700 SOLE DISPOSITIVE POWER
	10	- 0 - SHARED DISPOSITIVE POWER

1,812,700

11 AGGREGATE AMOUNT BENFICIALLY OWNED BY EACH REPROTING PERSON

1,812,700

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11)   
EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

10.3%

14 TYPE OF REPORTING PERSON

IN

CUSIP NO. 868873100

The following constitutes Amendment No. 4 ("Amendment No. 4") to the Schedule 13D filed by the undersigned. This Amendment No. 4 amends the Schedule 13D as specifically set forth herein.

Item 3. Source and Amount of Funds or Other Consideration.

Item 3 is hereby amended and restated to read as follows:

The Shares purchased by Starboard V&O Fund and held in the Starboard Value LP Account were purchased with working capital (which may, at any given time, include margin loans made by brokerage firms in the ordinary course of business) in open market purchases, except as otherwise noted, as set forth in Schedule A, which is incorporated by reference herein. The aggregate purchase price of the 1,359,522 Shares beneficially owned by Starboard V&O Fund is approximately \$12,678,223, excluding brokerage commissions. The aggregate purchase price of the 453,178 Shares held in the Starboard Value LP Account is approximately \$4,276,177, excluding brokerage commissions.

The 3,132 Shares owned personally by Jeffrey C. Smith represent Shares underlying certain options exercisable within 60 days that were granted to Mr. Smith as compensation for his service on the Board of Directors of the Issuer.

Item 5. Interest in Securities of the Issuer.

Items 5(a)-(c) are hereby amended and restated to read as follows:

The aggregate percentage of Shares reported owned by each person named herein is based upon 17,544,156 Shares outstanding, as of August 1, 2012, which is the total number of Shares outstanding as reported in the Issuer's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on August 9, 2012.

A. Starboard V&O Fund

(a) As of the close of business on August 13, 2012, Starboard V&O Fund beneficially owned 1,359,522 Shares.

Percentage: Approximately 7.7%.

- (b)
1. Sole power to vote or direct vote: 1,359,522
  2. Shared power to vote or direct vote: 0
  3. Sole power to dispose or direct the disposition: 1,359,522
  4. Shared power to dispose or direct the disposition: 0

(c) The transactions in the Shares by Starboard V&O Fund since the filing of Amendment No. 3 to the Schedule 13D are set forth in Schedule A and are incorporated herein by reference.

B. Starboard Value LP

(a) As of the close of business on August 13, 2012, 453,178 Shares were held in the Starboard Value LP Account. Starboard Value LP, as the investment manager of Starboard V&O Fund, may be deemed the beneficial owner of the 1,359,522 Shares owned by Starboard V&O Fund.

Percentage: Approximately 10.3%.



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- (b)
  - 1. Sole power to vote or direct vote: 1,812,700
  - 2. Shared power to vote or direct vote: 0
  - 3. Sole power to dispose or direct the disposition: 1,812,700
  - 4. Shared power to dispose or direct the disposition: 0

(c) The transactions in the Shares by Starboard Value LP through the Starboard Value LP Account and on behalf of Starboard V&O Fund since the filing of Amendment No. 3 to the Schedule 13D are set forth in Schedule A and are incorporated herein by reference.

C. Starboard Value GP

(a) Starboard Value GP, as the general partner of Starboard Value LP, may be deemed the beneficial owner of the (i) 1,359,522 Shares owned by Starboard V&O Fund and (ii) 453,178 Shares held in the Starboard Value LP Account.

Percentage: Approximately 10.3%.

- (b)
  - 1. Sole power to vote or direct vote: 1,812,700
  - 2. Shared power to vote or direct vote: 0
  - 3. Sole power to dispose or direct the disposition: 1,812,700
  - 4. Shared power to dispose or direct the disposition: 0

(c) Starboard Value GP has not entered into any transactions in the Shares since the filing of Amendment No. 3 to the Schedule 13D. The transactions in the Shares on behalf of Starboard V&O Fund and through the Starboard Value LP Account since the filing of Amendment No. 3 to the Schedule 13D are set forth in Schedule A and are incorporated herein by reference.

D. Principal Co

(a) Principal Co, as a member of Starboard Value GP, may be deemed the beneficial owner of the (i) 1,359,522 Shares owned by Starboard V&O Fund and (ii) 453,178 Shares held in the Starboard Value LP Account.

Percentage: Approximately 10.3%.

- (b)
  - 1. Sole power to vote or direct vote: 1,812,700
  - 2. Shared power to vote or direct vote: 0
  - 3. Sole power to dispose or direct the disposition: 1,812,700
  - 4. Shared power to dispose or direct the disposition: 0

(c) Principal Co has not entered into any transactions in the Shares since the filing of Amendment No. 3 to the Schedule 13D. The transactions in the Shares on behalf of Starboard V&O Fund and through the Starboard Value LP Account since the filing of Amendment No. 3 to the Schedule 13D are set forth in Schedule A and are incorporated herein by reference.

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E. Principal GP

(a) Principal GP, as the general partner of Principal Co, may be deemed the beneficial owner of the (i) 1,359,522 Shares owned by Starboard V&O Fund and (ii) 453,178 Shares held in the Starboard Value LP Account.

Percentage: Approximately 10.3%.

- (b)
1. Sole power to vote or direct vote: 1,812,700
  2. Shared power to vote or direct vote: 0
  3. Sole power to dispose or direct the disposition: 1,812,700
  4. Shared power to dispose or direct the disposition: 0

(c) Principal GP has not entered into any transactions in the Shares since the filing of Amendment No. 3 to the Schedule 13D. The transactions in the Shares on behalf of Starboard V&O Fund and through the Starboard Value LP Account since the filing of Amendment No. 3 to the Schedule 13D are set forth in Schedule A and are incorporated herein by reference.

F. Mr. Smith

(a) As of the close of business on August 13, 2012, Mr. Smith directly owned 3,132 Shares underlying certain options exercisable within 60 days. Mr. Smith, as a member of Principal GP and as a member of each of the Management Committee of Starboard Value GP and the Management Committee of Principal GP, may be deemed the beneficial owner of the (i) 1,359,522 Shares owned by Starboard V&O Fund and (ii) 453,178 Shares held in the Starboard Value LP Account.

Percentage: Approximately 10.4%.

- (b)
1. Sole power to vote or direct vote: 3,132
  2. Shared power to vote or direct vote: 1,812,700
  3. Sole power to dispose or direct the disposition: 3,132
  4. Shared power to dispose or direct the disposition: 1,812,700

(c) Mr. Smith has not entered into any transactions in the Shares since the filing of Amendment No. 3 to the Schedule 13D. The transactions in the Shares on behalf of Starboard V&O Fund and through the Starboard Value LP Account since the filing of Amendment No. 3 to the Schedule 13D are set forth in Schedule A and are incorporated herein by reference.

G. Messrs. Mitchell and Feld

(a) Each of Messrs. Mitchell and Feld, as a member of Principal GP and as a member of each of the Management Committee of Starboard Value GP and the Management Committee of Principal GP, may be deemed the beneficial owner of the (i) 1,359,522 Shares owned by Starboard V&O Fund and (ii) 453,178 Shares held in the Starboard Value LP Account.

Percentage: Approximately 10.3%.



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- (b)
  - 1. Sole power to vote or direct vote: 0
  - 2. Shared power to vote or direct vote: 1,812,700
  - 3. Sole power to dispose or direct the disposition: 0
  - 4. Shared power to dispose or direct the disposition: 1,812,700

(c) Neither of Messrs. Mitchell or Feld has entered into any transactions in the Shares since the filing of Amendment No. 3 to the Schedule 13D. The transactions in the Shares on behalf of Starboard V&O Fund and through the Starboard Value LP Account since the filing of Amendment No. 3 to the Schedule 13D are set forth in Schedule A and are incorporated herein by reference.

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SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: August 13, 2012

STARBOARD VALUE AND  
OPPORTUNITY MASTER FUND LTD

By: Starboard Value LP,  
its investment manager

STARBOARD VALUE LP  
By: Starboard Value GP LLC,  
its general partner

STARBOARD VALUE GP LLC

By: Starboard Principal Co LP,  
its member

STARBOARD PRINCIPAL CO LP

By: Starboard Principal Co GP LLC,  
its general partner

STARBOARD PRINCIPAL CO GP LLC

By: /s/ Jeffrey C.  
Smith  
Name: Jeffrey C.  
Smith  
Title: Authorized  
Signatory

/s/ Jeffrey C.  
Smith  
JEFFREY C.  
SMITH  
Individually  
and as  
attorney-in-fact  
for Mark  
Mitchell and  
Peter A. Feld



CUSIP NO. 868873100

## SCHEDULE A

## Transactions in the Shares Since the Filing of Amendment No. 3 to the Schedule 13D

Shares of Common Stock Purchased / (Sold)	Price Per Share(\$)	Date of Purchase / Sale
STARBOARD VALUE AND OPPORTUNITY MASTER FUND LTD		
(19,650)	17.7201	08/08/2012
(12,750)	17.7039	08/08/2012
(8,250)	17.7706	08/09/2012
(127,500)	17.7666	08/09/2012
(24,945)	17.6132	08/10/2012
(75)	17.5800	08/10/2012
(13,875)	17.5815	08/13/2012

STARBOARD VALUE LP  
(Through the Starboard Value LP Account)

(6,550)	17.7201	08/08/2012
(4,250)	17.7039	08/08/2012
(2,750)	17.7706	08/09/2012
(42,500)	17.7666	08/09/2012
(8,315)	17.6132	08/10/2012
(25)	17.5800	08/10/2012
(4,625)	17.5815	08/13/2012