

VERACYTE, INC.
Form 424B5
November 03, 2016

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[TABLE OF CONTENTS](#)

[TABLE OF CONTENTS](#)

[Table of Contents](#)

Filed pursuant to Rule 424(b)(5)
Registration No. 333-205204

PROSPECTUS SUPPLEMENT

(To Prospectus dated July 10, 2015)

5,000,000 Shares

Veracyte, Inc.

Common Stock

We are offering 5,000,000 shares of our common stock.

Our common stock is listed on The NASDAQ Global Market under the symbol "VCYT." On November 1, 2016, the last reported sale price of our shares of common stock on The NASDAQ Global Market was \$7.13 per share.

We are an emerging growth company under the federal securities laws and are subject to reduced public company reporting requirements.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page S-5 of this prospectus supplement.

| | Per Share | Total |
|---|------------------|---------------|
| Public offering price | \$ 6.00 | \$ 30,000,000 |
| Underwriting discounts and commissions(1) | \$ 0.36 | \$ 1,800,000 |
| Proceeds, before expenses, to us | \$ 5.64 | \$ 28,200,000 |

(1)

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See "Underwriting" for additional disclosure regarding underwriting discounts, commissions and estimated offering expenses.

We have granted the underwriters the right to purchase up to 750,000 additional shares of our common stock. The underwriters may exercise this right at any time within 30 days after the date of this prospectus supplement.

The underwriters expect to deliver the shares of common stock against payment in New York, New York on or about November 7, 2016.

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

Sole Book-Running Manager

Leerink Partners

Lead Manager

BTIG

The date of this prospectus supplement is November 1, 2016.

Table of Contents

TABLE OF CONTENTS

| | Page |
|--|-------------|
| Prospectus Supplement | |
| <u>About This Prospectus Supplement</u> | <u>S-ii</u> |
| <u>Prospectus Supplement Summary</u> | <u>S-1</u> |
| <u>Risk Factors</u> | <u>S-5</u> |
| <u>Forward-Looking Statements</u> | <u>S-7</u> |
| <u>Use of Proceeds</u> | <u>S-9</u> |
| <u>Dilution</u> | <u>S-10</u> |
| <u>Price Range of Common Stock</u> | <u>S-11</u> |
| <u>Dividend Policy</u> | <u>S-11</u> |
| <u>Underwriting</u> | <u>S-12</u> |
| <u>Legal Matters</u> | <u>S-19</u> |
| <u>Where You Can Find More Information</u> | <u>S-19</u> |
| <u>Experts</u> | <u>S-20</u> |
| Prospectus | |
| <u>About This Prospectus</u> | <u>2</u> |
| <u>Risk Factors</u> | <u>2</u> |
| <u>Veracyte, Inc.</u> | <u>2</u> |
| <u>Forward-Looking Statements</u> | <u>3</u> |
| <u>Use of Proceeds</u> | <u>3</u> |
| <u>Ratio of Earnings to Fixed Charges</u> | <u>3</u> |
| <u>Description of Debt Securities</u> | <u>4</u> |
| <u>Description of Preferred Stock</u> | <u>12</u> |
| <u>Description of Depositary Shares</u> | <u>13</u> |
| <u>Description of Common Stock</u> | <u>15</u> |
| <u>Description of Warrants</u> | <u>17</u> |
| <u>Description of Rights</u> | <u>18</u> |
| <u>Selling Stockholders</u> | <u>19</u> |
| <u>Plan of Distribution</u> | <u>20</u> |
| <u>Legal Matters</u> | <u>23</u> |
| <u>Experts</u> | <u>23</u> |
| <u>Where You Can Find More Information</u> | <u>23</u> |

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document contains two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part is the accompanying prospectus, which provides more general information, some of which may not apply to this offering. If the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus, you should rely on the information set forth in this prospectus supplement.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not, and the underwriters have not, authorized anyone else to provide you with information that is in addition to or different from that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus, along with the information contained in any permitted free writing prospectuses we have authorized for use in connection with this offering.

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 supplement and the accompanying prospectus is accurate only as of the date of this prospectus supplement or the date of the accompanying prospectus, and the information in the documents incorporated by reference in this prospectus supplement and the accompanying prospectus is accurate only as of the date of those respective documents, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since those dates. It is important for you to read and consider all information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus in making your investment decision. You should read both this prospectus supplement and the accompanying prospectus, as well as the documents incorporated by reference into this prospectus supplement and the accompanying prospectus and the additional information described under "Where You Can Find More Information" in this prospectus supplement and in the accompanying prospectus, before investing in our common stock.

Unless otherwise indicated or the context otherwise requires, references in this prospectus supplement and the accompanying prospectus to "Veracyte," the "company," "we," "us" and "our" refer to Veracyte, Inc.

Veracyte, Afirma, Percepta, Envisia, the Veracyte logo and the Afirma logo are our trademarks. This prospectus supplement, the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus may also contain trademarks and trade names that are the property of their respective owners. We do not intend our use or display of other companies' trade names, trademarks or service marks to imply relationships with, or endorsements or sponsorship of us by, these other companies.

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information about us and this offering. Because it is a summary, it does not contain all of the information that you should consider before investing. Before you decide to invest in our common stock, you should read carefully and in their entirety this entire prospectus supplement and the accompanying prospectus, including the section in this prospectus supplement entitled "Risk Factors," and the documents we have incorporated by reference in this prospectus supplement and the accompanying prospectus, along with our financial statements and accompanying notes incorporated by reference in this prospectus supplement and the accompanying prospectus.

Overview

We are a molecular diagnostics company that focuses on genomic solutions that resolve diagnostic ambiguity, thus enabling physicians to make more informed treatment decisions at an early stage in patient care. By improving diagnostic accuracy, we aim to help patients avoid unnecessary invasive procedures while reducing healthcare costs. Our first commercial solution, the Afirma Thyroid FNA Analysis, or Afirma, centers on the proprietary Afirma Gene Expression Classifier, or GEC, which is becoming a new standard of care in thyroid cancer diagnosis. The Afirma GEC helps physicians reduce the number of unnecessary surgeries by approximately 50% by employing a proprietary 142-gene signature to identify benign thyroid nodules among those deemed indeterminate by cytopathology alone. An additional 25 genes are used to differentiate uncommon neoplasm subtypes. We established the Afirma GEC's clinical validity in a study published in *The New England Journal of Medicine* in 2012 and have demonstrated the test's clinical utility, cost effectiveness and analytical validity in over 20 studies published in peer-reviewed journals. The Afirma GEC is recommended in leading practice guidelines and is covered as a medically necessary test by payers for 185 million lives in the United States, including through Medicare and many commercial insurance plans. As of September 30, 2016, we had 155 million lives under contract. Since the commercial launch of Afirma in January 2011 through September 30, 2016, we have received 290,000 fine needle aspiration, or FNA, samples for evaluation using Afirma and performed over 65,000 GECs to resolve indeterminate cytopathology results. We estimate the addressable thyroid nodule diagnostic market opportunity today is approximately \$500 million per year in the United States, and we believe that there is an estimated \$300 million additional market opportunity for the Afirma GEC internationally.

In April 2015, we accelerated our entry into pulmonology with the launch of the Percepta Bronchial Genomic Classifier, which we obtained through our acquisition of Allegro Diagnostics Corp. in September 2014. The Percepta classifier is designed to improve lung cancer screening and diagnosis by helping to reduce unnecessary, invasive, risky and costly procedures in patients with suspicious lung nodules and lesions, typically found on CT scans. The 23-gene classifier identifies patients with lung nodules who are at low or very low risk of cancer following an inconclusive bronchoscopy result, making it possible to monitor these patients with CT scans in lieu of invasive diagnostic procedures. Clinical validation data from two prospective, multicenter studies, AEGIS I and II, were published in July 2015 in *The New England Journal of Medicine*. In February 2016, the first clinical utility study for the Percepta classifier was published in *CHEST*, the official journal of the American College of Chest Physicians, suggesting that use of the Percepta test could reduce unnecessary surgeries and other invasive procedures by as much as 50% in the evaluated patient population. Also in February 2016, analytical verification data for the Percepta classifier were published online in *BMC Cancer*, establishing the quality and reproducibility of our testing processes. As of September 2016, three Medicare Administrative Contractors have issued draft local coverage policies that, if finalized, would cover Percepta for Medicare-eligible patients in those regions. As of September 2016, more than 40 thought-leading academic and other institutions around the country are offering Percepta to their patients during this initial stage of commercialization. We estimate the U.S. market opportunity for Percepta to

Table of Contents

be \$425 million to \$525 million today and expect the market to increase in size as lung cancer screening expands. The European market opportunity for Percepta is estimated to be \$220 million.

In October 2016, we announced the launch of our third commercial test, the Envisia Genomic Classifier, which is also in pulmonology. This test is designed to enable improved diagnosis of idiopathic pulmonary fibrosis, or IPF, among patients presenting with a suspected interstitial lung disease, or ILD, without the need for surgery. The 190-gene classifier uses machine learning coupled with powerful, deep RNA sequencing to detect the presence or absence of usual interstitial pneumonia, or UIP, a classic diagnostic pattern that is essential for the diagnosis of IPF. In an independent test set, the Envisia classifier demonstrated high specificity (88%) and sensitivity (67%) for UIP on patient samples obtained through less-invasive bronchoscopy. The test's results showed high concordance with review of surgical samples by surgical pathology. Our initial focus for the Envisia classifier is on building the clinical evidence needed to secure coverage and reimbursement from Medicare and private payers. We estimate the addressable market for our Envisia test to be over \$500 million in the United States and Europe.

Recent Developments

Our estimated financial results as of and for the three months ended September 30, 2016, presented below are preliminary and are subject to the completion of our quarter-end closing procedures and financial review. The preliminary financial data have been prepared by and are the responsibility of our management. Our independent registered public accounting firm has not audited, reviewed, compiled or performed any procedures with respect to the preliminary financial data. Accordingly, our independent registered public accounting firm does not express an opinion or any other form of assurance with respect thereto. These estimates are not a comprehensive statement of our financial results for this period and should not be viewed as a substitute for full interim financial statements prepared in accordance with generally accepted accounting principles. Our actual results may differ from these estimates as a result of the completion of our quarter-end closing procedures, review adjustments and other developments that may arise between now and the time our financial results for the period are finalized.

Preliminary third quarter 2016 results are summarized below:

Revenue for the third quarter of 2016 is expected to be \$18.6 million, an increase of 51%, compared to \$12.3 million for the third quarter of 2015. This includes an estimated \$3.5 million increase due to the accrual of tests that would have previously been recognized upon cash receipt.

Afirma GEC test volume was 5,740 tests, an increase of 14%, compared to the same period in 2015.

Operating expenses for the third quarter of 2016 are estimated to be \$23.5 to \$23.8 million, compared to \$21.2 million in the third quarter of 2015 and \$25.2 million in the second quarter of 2016.

Net loss is expected to be \$5.6 to \$5.9 million, or \$0.20 to \$0.21 per common share, versus a net loss of \$8.9 million, or \$0.32 per common share, for the same period in 2015.

Cash and cash equivalents as of September 30, 2016 is expected to be \$31.7 million, as compared with \$39.0 million at June 30, 2016.

Cash burn for the quarter is expected to be \$7.3 million and includes \$4.0 million in final payments to Sanofi Genzyme under our U.S. co-promotion agreement, which was terminated in September 2016.

Table of Contents

These estimates are preliminary and may change. In addition, these preliminary results for the three months ended September 30, 2016 are not necessarily indicative of the results to be achieved for the remainder of the fiscal year ending December 31, 2016 or in any future period. There can be no assurance that these estimates will be realized, and estimates are subject to risks and uncertainties, many of which are not within our control. See the sections entitled "Risk Factors" and "Forward-Looking Statements."

Company Information

We were incorporated in the state of Delaware on August 15, 2006 as Calderome, Inc. Calderome operated as an incubator until early 2008. On March 4, 2008, we changed our name to Veracyte, Inc. Our principal executive offices are located at 6000 Shoreline Court, Suite 300, South San Francisco, CA 94080 and our telephone number is (650) 243-6300. Our website address is www.veracyte.com. We do not incorporate the information on, or accessible through, our website into this prospectus supplement or the accompanying prospectus, and you should not consider any information on, or accessible through, our website as part of this prospectus supplement or the accompanying prospectus.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year following the fifth anniversary of the completion of our initial public offering of common stock (December 31, 2018), (2) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.0 billion, (3) the last day of the fiscal year in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the prior June 30th, and (4) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three-year period.

Table of Contents

THE OFFERING

| | |
|--|--|
| Issuer | Veracyte, Inc. |
| Common stock we are offering | 5,000,000 shares |
| Common stock to be outstanding after the offering | 32,864,285 shares (or 33,614,285 shares if the underwriters exercise in full their option to purchase additional shares of our common stock) |
| Option to purchase additional shares | We have granted the underwriters a 30-day option to purchase up to an additional 750,000 shares of our common stock. |
| Use of proceeds | We currently intend to use the net proceeds from this offering for working capital and other general corporate purposes. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies or other assets, although we have no present commitments or agreements to do so. See "Use of Proceeds." |
| Risk factors | See "Risk Factors" for a discussion of factors you should consider carefully before deciding to invest in our common stock. |
| NASDAQ Global Market symbol | "VCYT" |
| The number of shares of common stock to be outstanding immediately after this offering is based on June 30, 2016 and excludes: | 27,864,285 shares outstanding as of June 30, 2016 and excludes: |

5,362,144 shares of our common stock issuable upon the exercise or vesting of options outstanding as of June 30, 2016 at a weighted-average exercise price of \$7.59 per share;

876,886 shares of common stock reserved for future issuance under our 2013 Stock Incentive Plan; and

684,272 shares of common stock reserved for future issuance under our Employee Stock Purchase Plan.

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise by the underwriters of their option to purchase additional shares.

Table of Contents

RISK FACTORS

Investing in shares of our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below and in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2016 incorporated by reference in this prospectus supplement and the accompanying prospectus, any amendment or update thereto reflected in our subsequent filings with the Securities and Exchange Commission, and all of the other information in this prospectus supplement and the accompanying prospectus, including our financial statements and related notes incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision. If any of these risks is realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the trading price of our common stock could decline and you could lose part or all of your investment. Additional risks and uncertainties that are not yet identified or that we think are immaterial may also materially harm our business, operating results and financial condition and could result in a complete loss of your investment.

Additional Risks Related to Our Business

Our ability to use our net operating loss carryforwards may be limited and may result in increased future tax liability to us.

We have incurred net losses since our inception and may never achieve profitability. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire. We may be unable to use these losses to offset income before those unused losses expire. Generally, a change of more than 50% in the ownership of a corporation's stock, by value, over a three-year period constitutes an ownership change for U.S. federal income tax purposes. An ownership change may limit a company's ability to use its net operating loss carryforwards attributable to the period prior to such change. In the event we have undergone an ownership change under Section 382 of the Internal Revenue Code, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards to offset U.S. federal taxable income may become subject to limitations, which could potentially result in increased future tax liability to us.

Our financial results depend solely on sales of Afirma, and we will need to generate sufficient revenue from this and other diagnostic solutions to grow our business.

All of our revenues have been derived from the sale of Afirma, which we commercially launched in January 2011. For the foreseeable future, we expect to derive substantially all of our revenue from sales of Afirma. We launched our first product in pulmonology for lung cancer, Percepta, in April 2015, and our commercialization efforts may not be successful. We also launched Envisia for improved diagnosis of Idiopathic Pulmonary Fibrosis in October 2016, and our commercialization efforts for Envisia may not be successful. In addition, we are in various stages of research and development for other diagnostic solutions that we may offer, but there can be no assurance that we will be able to identify other diseases that can be effectively addressed with our molecular cytology platform or, if we are able to identify such diseases, whether or when we will be able to successfully commercialize solutions for these diseases. If we are unable to increase sales and expand reimbursement for Afirma, or successfully commercialize and obtain coverage and reimbursement for Percepta and Envisia and develop and commercialize other solutions, our revenue and our ability to achieve and sustain profitability would be impaired, and the market price of our common stock could decline.

Table of Contents

Additional Risks Related to This Offering

Our management will have broad discretion in the use of the net proceeds from this offering and may allocate the net proceeds from this offering in ways that you and other stockholders may not approve.

Our management will have broad discretion in the use of the net proceeds, including for any of the purposes described in the section entitled "Use of Proceeds," and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. The failure of our management to use these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. These investments may not yield a favorable return to our stockholders.

If you purchase shares of our common stock sold in this offering, you will experience immediate and substantial dilution in the net tangible book value of your shares. In addition, we may issue additional equity or equity-linked securities in the future, which may result in additional dilution to you.

The price per share of our common stock being offered may be higher than the net tangible book value per share of our outstanding common stock prior to this offering. Based on the public offering price of \$6.00 per share and our net tangible book value as of June 30, 2016 of approximately \$0.65 per share, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$4.60 per share, representing the difference between the public offering price and the as adjusted net tangible book value per share of our common stock as of June 30, 2016 after giving effect to this offering. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering. In addition, we have a significant number of outstanding options to purchase common stock. If the holders of these options exercise their options, you may incur further dilution. Also, to the extent we need to raise additional capital in the future and we issue additional shares of common stock or securities convertible into or exchangeable for our common stock, our then existing stockholders may experience dilution and the new securities may have rights senior to those of our common stock offered in this offering.

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

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. The accompanying prospectus also covers the sale by existing stockholders of up to 5,000,000 shares of our common stock and, as of the date of this prospectus supplement, most of our other outstanding shares of common stock are available for sale in the public market at any time by our existing stockholders, subject to Rule 144 limitations applicable to affiliates. We are unable to predict the effect that sales may have on the prevailing market price of our common stock.

Table of Contents

FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents we have filed with the Securities and Exchange Commission, or SEC, that are incorporated by reference in this prospectus supplement and the accompanying prospectus contain forward-looking statements that involve risks and uncertainties. These statements relate to future periods, future events or our future operating or financial plans or performance. These statements can often be identified by the use of forward-looking terminology such as "expects," "believes," "anticipates," "estimates," "plans," "may," "could," "will," "intends" or the negative of these terms, and other similar expressions and include statements as to the estimated market opportunities for our products, our estimated financial results as of and for the three months ended September 30, 2016, and our intentions with respect to the use of the net proceeds from this offering. We have based these forward-looking statements on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, strategy, short- and long-term business operations and objectives, and financial needs. These statements are subject to known and unknown risks, uncertainties and assumptions that could cause actual results to differ materially from those projected or otherwise implied by the forward-looking statements, including the following: the results of completion of our quarter-end closing procedures and financial review; our ability to increase usage of and reimbursement for Afirma and to obtain reimbursement for any future products we may develop or sell; our ability to continue our momentum and growth; our dependence on a few payers for a significant portion of our revenue; the complexity, time and expense associated with billing and collecting from payers for our tests; laws and regulations applicable to our business, including potential regulation by the Food and Drug Administration or other regulatory bodies; our ability to develop and commercialize new products and the timing of commercialization; our ability to successfully achieve adoption of and reimbursement for our Percepta and Envisia Bronchial Genomic Classifiers; our ability to achieve sales penetration in complex commercial accounts; the occurrence and outcome of clinical studies; the timing and publication of study results; the applicability of clinical results to actual outcomes; our inclusion in clinical practice guidelines; the continued application of clinical guidelines to our products; our ability to compete; and our ability to raise capital when needed. Given these risks, uncertainties and assumptions, you should not place undue reliance on these forward-looking statements. We discuss in greater detail, and incorporate by reference into this prospectus supplement and the accompanying prospectus, many of these risks, uncertainties and assumptions under the heading "Risk Factors." Additional cautionary statements or discussions of risks, uncertainties and assumptions that could affect our results or the achievement of the expectations described in forward-looking statements are also contained in the documents we incorporate by reference into this prospectus supplement and the accompanying prospectus.

Any forward-looking statement made by us in this prospectus supplement, the accompanying prospectus, or any of the documents incorporated by reference in this prospectus supplement and the accompanying prospectus speaks only as of the date on which it was made. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based. You should, however, review additional disclosures we make in our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K filed with the SEC.

You should read this prospectus supplement, the accompanying prospectus, and the documents that we reference in this prospectus supplement and the accompanying prospectus completely and with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

Table of Contents

This prospectus supplement, the accompanying prospectus, and the documents that we reference in this prospectus and the accompanying prospectus also contain statistical data and estimates that we obtained from industry publications and reports. These publications typically indicate that they have obtained their information from sources they believe to be reliable, but do not guarantee the accuracy and completeness of their information. You are cautioned not to give undue weight to those data and estimates. Projections, assumptions and estimates of future performance are necessarily subject to risks and uncertainties that could cause actual results to differ materially.

Table of Contents

USE OF PROCEEDS

We estimate that the net proceeds from the sale of shares of our common stock in this offering will be approximately \$28.0 million, after deducting the underwriting discounts and commissions and estimated offering expenses we expect to pay. If the underwriters exercise their option to purchase additional shares in full, we estimate that our net proceeds will be approximately \$32.2 million, after deducting the underwriting discounts and commissions and estimated offering expenses we expect to pay.

We currently intend to use the net proceeds of this offering for working capital and other general corporate purposes. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies or other assets, although we have no present commitments or agreements to do so. As a result, our management will have broad discretion in the way that we use the net proceeds and investors will be relying on our judgment regarding the application of the net proceeds of this offering. Pending the application of net proceeds, we expect to invest the net proceeds in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

S-9

Table of Contents**DILUTION**

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

Our net tangible book value as of June 30, 2016 was approximately \$18.0 million, or \$0.65 per share of our common stock. Net tangible book value per share is calculated by subtracting our total liabilities from our total tangible assets, which is total assets less intangible assets, and dividing this amount by the number of shares of our common stock outstanding. After giving effect to the sale by us of 5,000,000 shares our common stock at the public offering price of \$6.00 per share and after deducting the underwriting discounts and commissions and estimated offering expenses we expect to pay, our as adjusted net tangible book value as of June 30, 2016 would have been approximately \$46.0 million, or \$1.40 per share of our common stock. This represents an immediate increase in the net tangible book value of \$0.75 per share to our existing stockholders and an immediate and substantial dilution in net tangible book value of \$4.60 per share to new investors. The following table illustrates this per share dilution:

| | |
|---|---------|
| Public offering price per share | \$ 6.00 |
| Net tangible book value per share as of June 30, 2016 | \$ 0.65 |
| Increase in as adjusted net tangible book value per share attributable to new investors | 0.75 |
| As adjusted net tangible book value per share after this offering | 1.40 |
| Dilution per share to new investors participating in this offering | \$ 4.60 |

If the underwriters exercise in full their option to purchase up to 750,000 additional shares from us, the as adjusted net tangible book value per share after this offering would be \$1.50 per share and the dilution to new investors participating in this offering would be \$4.50 per share.

The calculations above are based on 27,864,285 shares of our common stock outstanding as of June 30, 2016. The number of shares of common stock outstanding as of June 30, 2016 excludes:

5,362,144 shares of our common stock issuable upon the exercise or vesting of options outstanding as of June 30, 2016 at a weighted-average exercise price of \$7.59 per share;

876,886 shares of common stock reserved for future issuance under our 2013 Stock Incentive Plan; and

684,272 shares of common stock reserved for future issuance under our Employee Stock Purchase Plan.

To the extent that any outstanding options are exercised or new options or shares are issued under our stock incentive plan or employee stock purchase plan after June 30, 2016, there will be further dilution to investors participating in this offering.

Table of Contents**PRICE RANGE OF COMMON STOCK**

Our common stock is listed on The NASDAQ Global Market under the symbol "VCYT." The following table sets forth, for the periods indicated, the high and low sales prices per share of our common stock as reported by The NASDAQ Global Market.

| | High | Low |
|---|----------|----------|
| 2014 | | |
| First Quarter | \$ 19.00 | \$ 13.76 |
| Second Quarter | 18.01 | 12.24 |
| Third Quarter | 17.92 | 9.22 |
| Fourth Quarter | 9.85 | 6.01 |
| 2015 | | |
| First Quarter | \$ 9.74 | \$ 6.50 |
| Second Quarter | 12.20 | 7.24 |
| Third Quarter | 12.47 | 4.59 |
| Fourth Quarter | 8.15 | 4.69 |
| 2016 | | |
| First Quarter | \$ 7.31 | \$ 4.21 |
| Second Quarter | 5.98 | 4.81 |
| Third Quarter | 7.96 | 4.83 |
| Fourth Quarter (through November 1, 2016) | 8.45 | 6.89 |

On November 1, 2016, the last reported sale price of our common stock on The NASDAQ Global Market was \$7.13 per share. As of October 28, 2016, there were approximately 23 holders of record of our common stock. This number does not reflect the beneficial ownership of shares held in nominee name.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. Our credit agreement restricts our ability to pay cash dividends on our common stock, and we may also enter into credit agreements or other borrowing arrangements in the future that will further restrict our ability to declare or pay cash dividends on our common stock. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant.

Table of Contents**UNDERWRITING**

Leerink Partners LLC is acting as representative of each of the underwriters named below and as sole bookrunning manager for this offering. Subject to the terms and conditions set forth in the underwriting agreement among us and the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of common stock set forth opposite its name below.

| Underwriter | Number of Shares |
|----------------------|-------------------------|
| Leerink Partners LLC | 4,000,000 |
| BTIG, LLC | 1,000,000 |
| Total | 5,000,000 |

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of the shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officers' certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representative has advised us that the underwriters propose initially to offer the shares to the public at the public offering price set forth on the cover page of this prospectus and to dealers at that price less a concession not in excess of \$0.216 per share. After the initial offering of the shares, the public offering price, concession or any other term of this offering may be changed by the representative.

The following table shows the public offering price, underwriting discounts and commissions and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their option to purchase additional shares of our common stock.

| | Per Share | Without Option | Total | With Option |
|--|------------------|-----------------------|--------------|--------------------|
| Public offering price | \$ 6.00 | \$ 30,000,000 | \$ | 34,500,000 |
| Underwriting discounts and commissions | \$ 0.36 | \$ 1,800,000 | \$ | 2,070,000 |
| Proceeds, before expenses, to us | \$ 5.64 | \$ 28,200,000 | \$ | 32,430,000 |

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$200,000. We also have agreed to reimburse the underwriters for up to \$15,000 for their FINRA counsel fee. In accordance with FINRA Rule 5110, this reimbursed fee is deemed underwriting compensation for this offering.

Table of Contents

Option to Purchase Additional Shares

We have granted an option to the underwriters, exercisable for 30 days after the date of this prospectus, to purchase up to 750,000 additional shares at the public offering price, less the underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional shares proportionate to that underwriter's initial amount reflected in the above table.

No Sales of Similar Securities

We, and our executive officers and directors, have agreed not to sell or transfer any common stock or securities convertible into or exchangeable or exercisable for common stock, for 90 days after the date of this prospectus without first obtaining the written consent of Leerink Partners LLC on behalf of the underwriters. Specifically, we and these other persons have agreed, with certain limited exceptions including sales pursuant to existing 10b5-1 trading plans, not to directly or indirectly:

offer, pledge, sell or contract to sell any common stock;

sell any option or contract to purchase any common stock;

purchase any option or contract to sell any common stock;

grant any option, right or warrant for the sale of any common stock;

otherwise dispose of or transfer any common stock;

make any demand for or exercise any right with respect to the registration of any shares of common stock; or

enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of any common stock, whether any such swap or transaction is to be settled by delivery of shares of common stock or other securities, in cash or otherwise.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition.

NASDAQ Global Market Listing

Our common stock is listed on The NASDAQ Global Market under the symbol "VCYT."

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the shares is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our common stock. However, the representative may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with this offering, the underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in this offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option described above. The underwriters may close out any covered short position by either exercising their option or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the

Table of Contents

underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option granted to them. "Naked" short sales are sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering. Stabilizing transactions consist of various bids for or purchases of shares of common stock made by the underwriters in the open market prior to the closing of this offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representative has repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on The NASDAQ Stock Market, in the over-the-counter market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the underwriters make any representation that the representative will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Electronic Distribution

In connection with this offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail.

Other Relationships

The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Some of the underwriters and certain of their affiliates may in the future engage in investment banking and other commercial dealings in the ordinary course of business with us and our affiliates, for which they may in the future receive customary fees, commissions and expenses.

In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Table of Contents

Selling Restrictions

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area (each, a "Relevant Member State"), no offer of shares may be made to the public in that Relevant Member State other than:

- A. to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- B. to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representative; or
- C. in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of shares shall require the Company or the representative to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a "qualified investor" within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representative has been obtained to each such proposed offer or resale.

We, the representative and each of our and the representative's and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

This prospectus has been prepared on the basis that any offer of shares in any Relevant Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly, any person making or intending to make an offer in that Relevant Member State of shares which are the subject of this offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for the company or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive in relation to such offer. Neither the company nor the underwriters have authorized, nor do they authorize, the making of any offer of shares in circumstances in which an obligation arises for the company or the underwriters to publish a prospectus for such offer.

For the purpose of the above provisions, the expression "an offer to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Table of Contents

Notice to Prospective Investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement and accompanying prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to Prospective Investors in the United Kingdom

This prospectus supplement and the accompanying prospectuses are only being distributed to, and are only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (1) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, or the Order, or (2) high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (each such person being referred to as a "relevant person"). This prospectus supplement and the accompanying prospectuses and their contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Notice to Prospective Investors in France

Neither this prospectus supplement nor any other offering material relating to the shares described in this prospectus supplement has been submitted to the clearance procedures of the Autorité des Marchés Financiers or of the competent authority of another member state of the European Economic Area and notified to the Autorité des Marchés Financiers. The shares have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France. Neither this prospectus supplement nor any other offering material relating to the shares has been or will be:

released, issued, distributed or caused to be released, issued or distributed to the public in France; or

used in connection with any offer for subscription or sale of the shares to the public in France.

Such offers, sales and distributions will be made in France only:

to qualified investors (investisseurs qualifiés) or to a restricted circle of investors (cercle restreint d'investisseurs), in each case investing for their own account, all as defined in, and in accordance with articles L.411-2, D.411-1, D.411-2, D.734-1, D.744-1, D.754-1 and D.764-1 of the French Code monétaire et financier;

Table of Contents

to investment services providers authorized to engage in portfolio management on behalf of third parties; or

in a transaction that, in accordance with article L.411-2-II-1^o-or-2^o-or 3^o of the French Code monétaire et financier and article 211-2 of the General Regulations (Règlement Général) of the Autorité des Marchés Financiers, does not constitute a public offer (appel public à l'épargne).

The shares may be resold directly or indirectly, only in compliance with articles L.411-1, L.411-2, L.412-1 and L.621-8 through L.621-8-3 of the French Code monétaire et financier.

Notice to Prospective Investors in Hong Kong

The shares may not be offered or sold in Hong Kong by means of any document other than (1) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong), (2) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder, or (3) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong) and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Notice to Prospective Investors in Japan

The shares offered in this prospectus supplement have not been and will not be registered under the Financial Instruments and Exchange Law of Japan. The shares have not been offered or sold and will not be offered or sold, directly or indirectly, in Japan or to or for the account of any resident of Japan (including any corporation or other entity organized under the laws of Japan), except (1) pursuant to an exemption from the registration requirements of the Financial Instruments and Exchange Law and (2) in compliance with any other applicable requirements of Japanese law.

Notice to Prospective Investors in Singapore

This prospectus supplement and the accompanying prospectuses have not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement and the accompanying prospectuses and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (1) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (2) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275 of the SFA, or (3) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to compliance with conditions set forth in the SFA.

Table of Contents

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

to an institutional investor (for corporations, under Section 274 of the SFA) or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than S\$200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets, and further for corporations, in accordance with the conditions specified in Section 275 of the SFA;

where no consideration is or will be given for the transfer; or

where the transfer is by operation of law.

Notice to Prospective Investors in Australia

No prospectus or other disclosure document (as defined in the Corporations Act 2001 (Cth) of Australia, or the Corporations Act) in relation to the common stock has been or will be lodged with the Australian Securities & Investments Commission, or ASIC. This document has not been lodged with ASIC and is only directed to certain categories of exempt persons. Accordingly, if you receive this document in Australia:

you confirm and warrant that you are either:

a "sophisticated investor" under section 708(8)(a) or (b) of the Corporations Act;

a "sophisticated investor" under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to us which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made;

a person associated with the company under section 708(12) of the Corporations Act; or

a "professional investor" within the meaning of section 708(11)(a) or (b) of the Corporations Act, and to the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act any offer made to you under this document is void and incapable of acceptance; and

you warrant and agree that you will not offer any of the common stock for resale in Australia within 12 months of that common stock being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

Table of Contents

LEGAL MATTERS

The validity of the shares of common stock being offered hereby will be passed upon for us by Pillsbury Winthrop Shaw Pittman LLP. Certain legal matters in connection with this offering will be passed upon for the underwriters by Latham & Watkins LLP.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-3 with the SEC under the Securities Act of 1933. This prospectus supplement and the accompanying prospectus are part of the registration statement but the registration statement includes and incorporates by reference additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement and any document we file with the SEC at the Public Reference Room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a web site that contains reports, proxy and information statements and other information regarding companies, such as ours, that file documents electronically with the SEC. The address of that site on the world wide web is <http://www.sec.gov>. The information on the SEC's web site is not part of this prospectus supplement or the accompanying prospectus, and any references to this web site or any other web site are inactive textual references only.

The SEC permits us to "incorporate by reference" the information contained in documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus supplement or the accompanying prospectus. Information that is incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus and you should read it with the same care that you read this prospectus supplement and the accompanying prospectus. Later information that we file with the SEC will automatically update and supersede the information that is either contained, or incorporated by reference, in this prospectus supplement and the accompanying prospectus, and will be considered to be a part of this prospectus supplement and the accompanying prospectus from the date those documents are filed. We have filed with the SEC, and incorporate by reference in this prospectus supplement and the accompanying prospectus:

our Annual Report on Form 10-K for the year ended December 31, 2015;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016; and

our Current Reports on Form 8-K filed with the SEC on March 4, 2016, March 28, 2016, March 30, 2016, June 13, 2016, June 17, 2016, October 3, 2016 (to the extent filed under Item 8.01) and November 1, 2016.

We also incorporate by reference all additional documents that we file with the SEC under the terms of Section 13(a), 13(c), 14 or 15(d) of the Exchange Act that are made after the initial filing date of the registration statement of which this prospectus supplement and the accompanying prospectus is a part and the effectiveness of the registration statement, as well as between the date of this prospectus supplement and the termination of any offering of securities offered by this prospectus supplement and the accompanying prospectus. We are not, however, incorporating, in each case, any documents or information that we are deemed to furnish and not file in accordance with SEC rules.

You may request a copy of any or all of the documents incorporated by reference but not delivered with this prospectus supplement and the accompanying prospectus, at no cost, by writing or telephoning us at the following address and number: Investor Relations, Veracyte, Inc., 6000 Shoreline Court, Suite 300, South San Francisco, CA 94080 and (650) 243-6300. We will not, however, send exhibits to those documents, unless the exhibits are specifically incorporated by reference in those documents.

Table of Contents

We make available free of charge on our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports, as soon as reasonably practicable after we electronically file or furnish such materials to the SEC. You may obtain a free copy of these reports on the Investor Relations section of our website, www.veracyte.com.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2015, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

S-20

Table of Contents

PROSPECTUS

\$125,000,000

VERACYTE, INC.

**Debt Securities, Common Stock,
Preferred Stock, Depositary Shares,
Warrants and Rights**

5,000,000 Shares of Common Stock Offered by Selling Stockholders

We may, from time to time, offer and sell debt securities, preferred stock, either separately or represented by depositary shares, common stock, warrants or rights, either separately or together in any combination, in one or more offerings. The debt securities, preferred stock and warrants may be convertible into or exercisable or exchangeable for common or preferred stock or debt securities. The rights may be exercisable for common or preferred stock. The aggregate initial offering price of all securities sold under this prospectus will not exceed \$125,000,000.

In addition, certain of our stockholders may, from time to time, offer and sell up to an aggregate of 5,000,000 shares of our common stock in one or more offerings. Unless otherwise stated in the applicable prospectus supplement, we will not receive any of the proceeds from the sale of our common stock by the selling stockholders.

We will specify in an accompanying prospectus supplement more specific information about any such offering, the identity of any selling stockholders and the number of shares that any such selling stockholder will be selling. This prospectus may not be used to sell any of these securities unless accompanied by the applicable prospectus supplement.

We and the selling stockholders may offer and sell the securities described in this prospectus and any prospectus supplement directly to investors or through underwriters, dealers or agents. We will set forth the names of any underwriters, dealers or agents and their compensation in the accompanying prospectus supplement.

Our common stock is listed on The NASDAQ Global Market under the symbol "VCYT." On June 22, 2015, the last reported sale price of our common stock on The NASDAQ Global Market was \$11.54 per share.

Investing in our securities involves risks. See the section entitled "Risk Factors" in the accompanying prospectus supplement and in the documents we incorporate by reference in this prospectus.

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

The date of this prospectus is July 10, 2015

Table of Contents

TABLE OF CONTENTS

| | Page |
|--|-----------|
| <u>About This Prospectus</u> | <u>2</u> |
| <u>Risk Factors</u> | <u>2</u> |
| <u>Veracyte, Inc.</u> | <u>2</u> |
| <u>Forward-Looking Statements</u> | <u>3</u> |
| <u>Use of Proceeds</u> | <u>3</u> |
| <u>Ratio of Earnings to Fixed Charges</u> | <u>3</u> |
| <u>Description of Debt Securities</u> | <u>4</u> |
| <u>Description of Preferred Stock</u> | <u>12</u> |
| <u>Description of Depositary Shares</u> | <u>13</u> |
| <u>Description of Common Stock</u> | <u>15</u> |
| <u>Description of Warrants</u> | <u>17</u> |
| <u>Description of Rights</u> | <u>18</u> |
| <u>Selling Stockholders</u> | <u>19</u> |
| <u>Plan of Distribution</u> | <u>20</u> |
| <u>Legal Matters</u> | <u>23</u> |
| <u>Experts</u> | <u>23</u> |
| <u>Where You Can Find More Information</u> | <u>23</u> |

You should rely only on the information incorporated by reference or provided in this prospectus, any prospectus supplement and the registration statement. We have not authorized anyone else to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus and any prospectus supplement, or incorporated by reference, is accurate only as of the dates of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

Table of Contents

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration, or continuous offering, process. Under this shelf registration process, we may, from time to time, offer and sell separately or together in any combination the securities described in this prospectus in one or more offerings up to a maximum aggregate offering price of \$125,000,000. In addition, certain of our stockholders may, from time to time, offer and sell up to an aggregate of 5,000,000 shares of our common stock in one or more offerings.

This prospectus provides you with a general description of the securities we and the selling stockholders may offer. Each time we or the selling stockholders sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering and the offered securities. Any prospectus supplement may also add, update or change information contained in this prospectus. Any statement that we make in this prospectus will be modified or superseded by any inconsistent statement made by us in a prospectus supplement. The registration statement we filed with the SEC includes exhibits that provide more detail of the matters discussed in this prospectus. You should read this prospectus and the related exhibits filed with the SEC and any prospectus supplement, together with additional information described under the heading "Where You Can Find More Information," before making your investment decision.

Unless the context otherwise requires, references in this prospectus and the accompanying prospectus supplement to "Veracyte," the "company," "we," "us" and "our" refer to Veracyte, Inc. and its consolidated subsidiaries.

Veracyte, Afirma, the Veracyte logo and the Afirma logo are our trademarks. This prospectus and the documents incorporated by reference into this prospectus may also contain trademarks and trade names that are the property of their respective owners. We do not intend our use or display of other companies' trade names, trademarks or service marks to imply relationships with, or endorsements or sponsorship of us by, these other companies.

RISK FACTORS

Investing in our securities involves risk. The prospectus supplement relating to a particular offering will contain a discussion of risks applicable to an investment in the securities offered. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading "Risk Factors" in the applicable prospectus supplement together with all of the other information contained in the prospectus supplement or appearing or incorporated by reference in this prospectus, including the risk factors incorporated by reference to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

VERACYTE, INC.

We are a molecular diagnostics company, pioneering the field of molecular cytology with genomic solutions that resolve diagnostic ambiguity and enable physicians to make more informed treatment decisions at an early stage in patient care. We believe that diagnostic ambiguity is a significant problem impacting our healthcare system, resulting in hundreds of thousands of patients undergoing unnecessary, invasive procedures and wasting billions of healthcare dollars each year. We target diseases in which large numbers of patients undergo invasive and costly diagnostic procedures that could be avoided with a more accurate diagnosis from a cytology sample taken preoperatively. By improving diagnosis preoperatively, we help patients avoid unnecessary invasive procedures and surgeries while reducing healthcare costs. We are focused on the continued growth of our

Table of Contents

endocrinology franchise, and we recently entered into our second clinical indication, pulmonology, with the launch of our Percepta Bronchial Genomic Classifier in April 2015.

We were incorporated in Delaware as Calderome, Inc. in August 2006. Calderome operated as an incubator until early 2008. We changed our name to Veracyte, Inc. in March 2008. Our principal executive offices are located at 7000 Shoreline Court, Suite 250, South San Francisco, California 94080 and our telephone number is (650) 243-6300. Our website address is www.veracyte.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 accessible through, our website as part of this prospectus.

FORWARD-LOOKING STATEMENTS

When used in this prospectus, the words "expects," "believes," "anticipates," "estimates," "may," "could," "intends," and similar expressions are intended to identify forward-looking statements. These statements are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from those projected or otherwise implied by the forward-looking statements. These forward-looking statements speak only as of the date of this prospectus. Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. We will discuss many of these risks and uncertainties in greater detail in any prospectus supplement under the heading "Risk Factors." Additional cautionary statements or discussions of risks and uncertainties that could affect our results or the achievement of the expectations described in forward-looking statements may also be contained in the documents we incorporate by reference into this prospectus.

These forward-looking statements speak only as of the date of this prospectus. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based. You should, however, review additional disclosures we make in our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K filed with the SEC.

USE OF PROCEEDS

Unless we state otherwise in the applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities offered by this prospectus for general corporate purposes. General corporate purposes may include additions to working capital, financing of capital expenditures, repayment or redemption of existing indebtedness, and future acquisitions and strategic investment opportunities. Unless we state otherwise in the applicable prospectus supplement, pending the application of net proceeds, we expect to invest the net proceeds in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. Unless we state otherwise in the applicable prospectus supplement, we will not receive any of the proceeds from the sale of our common stock by the selling stockholders.

RATIO OF EARNINGS TO FIXED CHARGES

The ratio of earnings to fixed charges for each of the periods indicated are set forth in the following table. Our earnings were insufficient to cover fixed charges for each of those periods. For the periods indicated, we had no outstanding shares of preferred stock with required dividend payments.

Table of Contents

Therefore, earnings were insufficient to cover combined fixed charges and preferred stock dividends by the same amounts referenced in footnote 1 below.

| | Year Ended December 31, | | | | Three Months |
|------------------------------------|-------------------------|------|------|------|-------------------------|
| | 2011 | 2012 | 2013 | 2014 | Ended March 31, 2015 |
| Ratio of earnings to fixed charges | (1) | (1) | (1) | (1) | (1) |

(1) The ratio of earnings to fixed charges is computed by dividing loss before taxes plus fixed charges by fixed charges. Fixed charges consist of interest expense (including interest expense from capital leases), debt financing expense and the estimated portion of rental expense deemed by us to be representative of the interest factor of rental payments under operating leases. Earnings were insufficient to cover fixed charges by \$14.4 million, \$18.6 million, \$25.6 million, \$29.4 million and \$7.6 million for the years ended December 31, 2011, 2012, 2013 and 2014 and the three months ended March 31, 2015, respectively.

DESCRIPTION OF DEBT SECURITIES

The following is a summary of the general terms of the debt securities. We will file a prospectus supplement that may contain additional terms when we issue debt securities. The terms presented here, together with the terms in a related prospectus supplement, together with any pricing supplement or term sheet, will be a description of the material terms of the debt securities.

We may issue, from time to time, debt securities, in one or more series. These debt securities that we may issue include senior debt securities, senior subordinated debt securities, subordinated debt securities, convertible debt securities and exchangeable debt securities. The debt securities we offer will be issued under an indenture between us and the trustee named in the indenture. The following is a summary of the material provisions of the form of indenture filed as an exhibit to the registration statement of which this prospectus is a part. For each series of debt securities, the applicable prospectus supplement for the series may change and supplement the summary below.

As used in this section only, "we," "us" and "our" refer to Veracyte, Inc. excluding our subsidiaries, unless expressly stated or the context otherwise requires.

General Terms of the Indenture

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

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

Table of Contents

You should refer to the prospectus supplement relating to a particular series of debt securities for a description of the following terms of the debt securities offered by that prospectus supplement and by this prospectus:

the title and authorized denominations of those debt securities;

any limit on the aggregate principal amount of that series of debt securities;

the date or dates on which principal and premium, if any, of the debt securities of that series is payable;

interest rates, and the dates from which interest, if any, on the debt securities of that series will accrue, and the dates when interest is payable and the maturity;

the right, if any, to extend the interest payment periods and the duration of the extensions;

if the amount of payments of principal or interest is to be determined by reference to an index or formula, or based on a coin or currency other than that in which the debt securities are stated to be payable, the manner in which these amounts are determined and the calculation agent, if any, with respect thereto;

the place or places where and the manner in which principal of, premium, if any, and interest, if any, on the debt securities of that series will be payable and the place or places where those debt securities may be presented for transfer and, if applicable, conversion or exchange;

the period or periods within which, the price or prices at which, and other terms and conditions upon which those debt securities may be redeemed, in whole or in part, at our option or the option of a holder of those securities, if we or a holder is to have that option;

our obligation or right, if any, to redeem, repay or purchase those debt securities pursuant to any sinking fund or analogous provision or at the option of a holder of those securities, and the terms and conditions upon which the debt securities will be redeemed, repaid or purchased, in whole or in part, pursuant to that obligation;

the terms, if any, on which the debt securities of that series will be subordinate in right and priority of payment to our other debt;

the denominations in which those debt securities will be issuable;

if other than the entire principal amount of the debt securities when issued, the portion of the principal amount payable upon acceleration of maturity as a result of a default on our obligations;

whether any securities of that series are to be issued in whole or in part in the form of one or more global securities and the depositary for those global securities;

if the principal of or any premium or interest on the debt securities of that series is to be payable, or is to be payable at our election or the election of a holder of those securities, in securities or other property, the type and amount of those securities

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or other property, or the manner of determining that amount, and the period or periods within which, and the terms and conditions upon which, any such election may be made;

the events of default and covenants relating to the debt securities that are in addition to, modify or delete those described in this prospectus;

conversion or exchange provisions, if any, including conversion or exchange prices or rates and adjustments thereto;

Table of Contents

whether and upon what terms the debt securities may be defeased, if different from the provisions set forth in the indenture;

the nature and terms of any security for any secured debt securities;

the terms applicable to any debt securities issued at a discount from their stated principal amount; and

any other specific terms of any debt securities.

The applicable prospectus supplement will present material United States federal income tax considerations for holders of any debt securities and the securities exchange or quotation system on which any debt securities are to be listed or quoted.

Conversion or Exchange Rights

Debt securities may be convertible into or exchangeable for shares of our equity securities or other securities. The terms and conditions of conversion or exchange will be stated in the applicable prospectus supplement. The terms will include, among others, the following:

the conversion or exchange price;

the conversion or exchange period;

provisions regarding our ability or the ability of any holder to convert or exchange the debt securities;

events requiring adjustment to the conversion or exchange price; and

provisions affecting conversion or exchange in the event of our redemption of the debt securities.

Consolidation, Merger or Sale

We cannot consolidate with or merge with or into, or transfer or lease all or substantially all of our assets to, any person, unless we are the surviving corporation or the successor person is a corporation organized under the laws of the United States, any state of the United States or the District of Columbia and expressly assumes our obligations under the debt securities and the indenture. In addition, we cannot complete such a transaction unless immediately after completing the transaction, no event of default under the indenture, and no event that, after notice or lapse of time or both, would become an event of default under the indenture, has occurred and is continuing. When the successor person has assumed our obligations under the debt securities and the indenture, we will be discharged from all our obligations under the debt securities and the indenture except in limited circumstances.

This covenant would not apply to any recapitalization transaction, a change of control affecting us or a highly leveraged transaction, unless the transaction or change of control were structured to include a merger or consolidation or transfer or lease of all or substantially all of our assets.

Events of Default

The indenture provides that the following will be "events of default" with respect to any series of debt securities:

failure to pay interest for 30 days after the date payment is due and payable;

failure to pay principal or premium, if any, on any debt security when due, either at maturity, upon any redemption, by declaration or otherwise and, in the case of technical or administrative difficulties, only if such default persists for a period of more than three business days;

Table of Contents

failure to make sinking fund payments when due and continuance of such default for a period of 30 days;

failure to perform other covenants for 60 days after notice that performance was required;

events in bankruptcy, insolvency or reorganization relating to us; or

any other event of default provided in the applicable officer's certificate, resolution of our board of directors or the supplemental indenture under which we issue a series of debt securities.

An event of default for a particular series of debt securities does not necessarily constitute an event of default for any other series of debt securities issued under the indenture. For each series of debt securities, any modifications to the above events of default will be described in the applicable prospectus supplement for those debt securities.

The indenture provides that if an event of default specified in the first, second, third, fourth or sixth bullets above occurs and is continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series may declare the principal amount of all those debt securities (or, in the case of discount securities or indexed securities, that portion of the principal amount as may be specified in the terms of that series) to be due and payable immediately. If an event of default specified in the fifth bullet above occurs and is continuing, then the principal amount of all those debt securities (or, in the case of discount securities or indexed securities, that portion of the principal amount as may be specified in the terms of that series) will be due and payable immediately, without any declaration or other act on the part of the trustee or any holder. In certain cases, holders of a majority in principal amount of the outstanding debt securities of any series may, on behalf of holders of all those debt securities, rescind and annul a declaration of acceleration.

The indenture imposes limitations on suits brought by holders of debt securities against us. Except for actions for payment of overdue principal or interest, no holder of debt securities of any series may institute any action against us under the indenture unless:

the holder has previously given to the trustee written notice of default and continuance of such default;

the holders of at least 25% in principal amount of the outstanding debt securities of the affected series have requested that the trustee institute the action;

the requesting holders have offered the trustee indemnity for the reasonable expenses and liabilities that may be incurred by bringing the action;

the trustee has not instituted the action within 60 days of the request and offer of indemnity; and

the trustee has not received inconsistent direction by the holders of a majority in principal amount of the outstanding debt securities of the affected series.

We will be required to file annually with the trustee a certificate, signed by one of our officers, stating whether or not the officer knows of any default by us in the performance, observance or fulfillment of any condition or covenant of the indenture.

Discharge, Defeasance and Covenant Defeasance

We can discharge or decrease our obligations under the indenture as stated below.

We may discharge obligations to holders of any series of debt securities that have not already been delivered to the trustee for cancellation and that have either become due and payable or are by their terms to become due and payable, or are scheduled for redemption, within one year. We may effect a discharge by irrevocably depositing with the trustee cash or government obligations, as trust funds, in

Table of Contents

an amount certified to be enough to pay when due, whether at maturity, upon redemption or otherwise, the principal of, and any premium and interest on, the debt securities and any mandatory sinking fund payments.

Unless otherwise provided in the applicable prospectus supplement, we may also discharge any and all of our obligations to holders of any series of debt securities at any time, which we refer to as defeasance. We may also be released from the obligations imposed by any covenants of any outstanding series of debt securities and provisions of the indenture, and we may omit to comply with those covenants without creating an event of default under the trust declaration, which we refer to as covenant defeasance. We may effect defeasance and covenant defeasance only if, among other things:

we irrevocably deposit with the trustee cash or government obligations denominated in the currency of the debt securities, as trust funds, in an amount certified to be enough to pay at maturity, or upon redemption, the principal (including any mandatory sinking fund payments) of, and any premium and interest on, all outstanding debt securities of the series; and

we deliver to the trustee an opinion of counsel from a nationally recognized law firm to the effect that the holders of the series of debt securities will not recognize income, gain or loss for U.S. federal income tax purposes as a result of the defeasance or covenant defeasance and that defeasance or covenant defeasance will not otherwise alter the holders' U.S. federal income tax treatment of principal, and any premium and interest payments on, the series of debt securities.

In the case of a defeasance by us, the opinion we deliver must be based on a ruling of the Internal Revenue Service issued, or a change in U.S. federal income tax law occurring, after the date of the indenture, since such a result would not occur under the U.S. federal income tax laws in effect on that date.

Although we may discharge or decrease our obligations under the indenture as described in the two preceding paragraphs, we may not avoid, among other things, our duty to register the transfer or exchange of any series of debt securities, to replace any temporary, mutilated, destroyed, lost or stolen series of debt securities or to maintain an office or agency in respect of any series of debt securities.

Modification of the Indenture

The indenture provides that we and the trustee may enter into supplemental indentures without the consent of the holders of debt securities to, among other things:

evidence the assumption by a successor entity of our obligations;

add to our covenants for the benefit of the holders of debt securities, or to surrender any rights or power conferred upon us;

add any additional events of default;

add to, change or eliminate any of the provisions of the indenture in a manner that will become effective only when there is no outstanding debt security which is entitled to the benefit of the provision as to which the modification would apply;

add guarantees with respect to or secure any debt securities;

establish the forms or terms of debt securities of any series;

evidence and provide for the acceptance of appointment by a successor trustee and add to or change any of the provisions of the indenture as is necessary for the administration of the trusts by more than one trustee;

cure any ambiguity or correct any inconsistency or defect in the indenture;

Table of Contents

modify, eliminate or add to the provisions of the indenture as shall be necessary to effect the qualification of the indenture under the Trust Indenture Act of 1939 or under any similar federal statute later enacted, and to add to the indenture such other provisions as may be expressly required by the Trust Indenture Act; and

make any other provisions with respect to matters or questions arising under the indenture that will not be inconsistent with any provision of the indenture as long as the new provisions do not adversely affect the interests of the holders of any outstanding debt securities of any series created prior to the modification.

The indenture also provides that we and the trustee may, with the consent of the holders of not less than a majority in aggregate principal amount of debt securities of each series of debt securities affected by such supplemental indenture then outstanding, add any provisions to, or change in any manner, eliminate or modify in any way the provisions of, the indenture or any supplemental indenture or modify in any manner the rights of the holders of the debt securities. We and the trustee may not, however, without the consent of the holder of each outstanding debt security affected thereby:

extend the final maturity of any debt security;

reduce the principal amount or premium, if any;

reduce the rate or extend the time of payment of interest;

reduce the amount of the principal of any debt security issued with an original issue discount that is payable upon acceleration;

change the currency in which the principal, and any premium or interest, is payable;

impair the right to institute suit for the enforcement of any payment on any debt security when due;

if applicable, adversely affect the right of a holder to convert or exchange a debt security; or

reduce the percentage of holders of debt securities of any series whose consent is required for any modification of the indenture or for waivers of compliance with or defaults under the indenture with respect to debt securities of that series.

The indenture provides that the holders of not less than a majority in aggregate principal amount of the then outstanding debt securities of any series, by notice to the relevant trustee, may on behalf of the holders of the debt securities of that series waive any default and its consequences under the indenture except:

a default in the payment of, any premium and any interest on, or principal of, any such debt security held by a nonconsenting holder; or

a default in respect of a covenant or provision of the indenture that cannot be modified or amended without the consent of the holder of each outstanding debt security of each series affected.

Registered Global Securities and Book Entry System

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The debt securities of a series may be issued in whole or in part in book-entry form and will be represented by one or more fully registered global securities. We will deposit any registered global securities with a depositary or with a nominee for a depositary identified in the applicable prospectus supplement and registered in the name of such depositary or nominee. In such case, we will issue one or more registered global securities denominated in an amount equal to the aggregate principal amount of all of the debt securities of the series to be issued and represented by such registered global security or securities. This means that we will not issue certificates to each holder.

Table of Contents

Unless and until it is exchanged in whole or in part for debt securities in definitive registered form, a registered global security may not be transferred except as a whole:

by the depositary for the registered global security to its nominee;

by a nominee of the depositary to the depositary or another nominee of the depositary; or

by the depositary or its nominee to a successor of the depositary or a nominee of the successor.

The prospectus supplement relating to a series of debt securities will describe the specific terms of the depositary arrangement involving any portion of the series represented by a registered global security. We anticipate that the following provisions will apply to all depositary arrangements for debt securities:

ownership of beneficial interests in a registered global security will be limited to persons that have accounts with the depositary for such registered global security, these persons being referred to as "participants," or persons that may hold interests through participants;

upon the issuance of a registered global security, the depositary for the registered global security will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal amounts of the debt securities represented by the registered global security beneficially owned by the participants;

any dealers, underwriters, or agents participating in the distribution of the debt securities will designate the accounts to be credited; and

ownership of beneficial interest in the registered global security will be shown on, and the transfer of the ownership interest will be effected only through, records maintained by the depositary for the registered global security for interests of participants, and on the records of participants for interests of persons holding through participants.

The laws of some states may require that specified purchasers of securities take physical delivery of the securities in definitive form. These laws may limit the ability of those persons to own, transfer or pledge beneficial interests in registered global securities.

So long as the depositary for a registered global security, or its nominee, is the registered owner of the registered global security, the depositary or such nominee, as the case may be, will be considered the sole owner or holder of the debt securities represented by the registered global security for all purposes under the indenture. Except as stated below, owners of beneficial interests in a registered global security:

will not be entitled to have the debt securities represented by a registered global security registered in their names;

will not receive or be entitled to receive physical delivery of the debt securities in the definitive form; and

will not be considered the owners or holders of the debt securities under the relevant indenture.

Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depositary for the registered global security and, if the person is not a participant, on the procedures of a participant through which the person owns its interest, to exercise any rights of a holder under the indenture.

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We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a registered global security desires to give or take any action that a holder is entitled to give or take under the indenture, the depository for the registered global security would authorize the participants holding the relevant beneficial interests to give or take the action, and

Table of Contents

the participants would authorize beneficial owners owning through the participants to give or take the action or would otherwise act upon the instructions of beneficial owners holding through them.

We will make payments of principal and premium, if any, and interest, if any, on debt securities represented by a registered global security registered in the name of a depositary or its nominee to the depositary or its nominee, as the case may be, as the registered owners of the registered global security. Neither we nor the trustee, or any other agent of ours or the trustee will be responsible or liable for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to the beneficial ownership interests.

We expect that the depositary for any debt securities represented by a registered global security, upon receipt of any payments of principal and premium, if any, and interest, if any, in respect of the registered global security, will immediately credit participants' accounts with payments in amounts proportionate to their respective beneficial interests in the registered global security as shown on the records of the depositary. We also expect that standing customer instructions and customary practices will govern payments by participants to owners of beneficial interests in the registered global security held through the participants, as is now the case with the securities held for the accounts of customers in bearer form or registered in "street name." We also expect that any of these payments will be the responsibility of the participants.

If the depositary for any debt securities represented by a registered global security is at any time unwilling or unable to continue as depositary or stops being a clearing agency registered under the Exchange Act, we will appoint an eligible successor depositary. If we fail to appoint an eligible successor depositary within 90 days, we will issue the debt securities in definitive form in exchange for the registered global security. In addition, we may at any time and in our sole discretion decide not to have any of the debt securities of a series represented by one or more registered global securities. In that event, we will issue debt securities of the series in a definitive form in exchange for all of the registered global securities representing the debt securities. The trustee will register any debt securities issued in definitive form in exchange for a registered global security in the name or names as the depositary, based upon instructions from its participants, shall instruct the trustee.

Concerning the Trustee

The indenture provides that there may be more than one trustee under the indenture, each for one or more series of debt securities. If there are different trustees for different series of debt securities, each trustee will be a trustee of a trust under the indenture separate and apart from the trust administered by any other trustee under that indenture. Except as otherwise indicated in this prospectus or any prospectus supplement, any action permitted to be taken by a trustee may be taken by such trustee only on the one or more series of debt securities for which it is the trustee under the indenture. Any trustee under the indenture may resign or be removed from one or more series of debt securities. All payments of principal of, and any premium and interest on, and all registration, transfer, exchange, authentication and delivery of, the debt securities of a series will be effected by the trustee for that series at an office designated by the trustee in New York, New York.

The indenture provides that, except during the continuance of an event of default, the trustee will perform only such duties as are specifically set forth in the indenture. During the existence of an event of default, the trustee will exercise those rights and powers vested in it under the indenture and use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

If the trustee becomes a creditor of ours, the indenture places limitations on the right of the trustee to obtain payment of claims or to realize on property received in respect of any such claim as security or otherwise. The trustee may engage in other transactions. If it acquires any conflicting

Table of Contents

interest relating to any duties concerning the debt securities, however, it must eliminate the conflict or resign as trustee.

No Individual Liability of Incorporators, Stockholders, Officers or Directors

The indenture provides that no past, present or future director, officer, stockholder or employee of ours, any of our affiliates, or any successor corporation, in their capacity as such, shall have any individual liability for any of our obligations, covenants or agreements under the debt securities or the indenture.

Governing Law

The indenture and the debt securities will be governed by, and construed in accordance with, the laws of the State of New York.

DESCRIPTION OF PREFERRED STOCK

As of May 1, 2015, our authorized preferred stock, par value \$0.001 per share, was 5,000,000 shares, none of which were issued and outstanding. We may issue preferred stock, in series, with such designations, powers, preferences and other rights and qualifications, limitations or restrictions as our board of directors may authorize, without further action by our stockholders, including:

the distinctive designation of each series and the number of shares that will constitute the series;

the voting rights, if any, of shares of the series and the terms and conditions of the voting rights;

the dividend rate on the shares of the series, the dates on which dividends are payable, any restriction, limitation or condition upon the payment of dividends, whether dividends will be cumulative, and the dates from and after which dividends shall accumulate;

the prices at which, and the terms and conditions on which, the shares of the series may be redeemed, if the shares are redeemable;

the terms and conditions of a sinking or purchase fund for the purchase or redemption of shares of the series, if such a fund is provided;

any preferential amount payable upon shares of the series in the event of the liquidation, dissolution or winding up of, or upon the distribution of any of our assets; and

the prices or rates of conversion or exchange at which, and the terms and conditions on which, the shares of the series may be converted or exchanged into other securities, if the shares are convertible or exchangeable.

The particular terms of any series of preferred stock, and the transfer agent and registrar for that series, will be described in a prospectus supplement. Any material United States federal income tax consequences and other special considerations with respect to any preferred stock offered under this prospectus will also be described in the applicable prospectus supplement.

Table of Contents

DESCRIPTION OF DEPOSITARY SHARES

The following description of the depositary shares does not purport to be complete and is subject to and qualified in its entirety by the relevant deposit agreement and the depositary receipts with respect to the depositary shares relating to any particular series of preferred stock. You should read these documents as they, and not this description, will define your rights as a holder of depositary shares. Forms of these documents will be filed with the SEC in connection with the offering of depositary shares.

General

If we elect to offer fractional interests in shares of preferred stock, we will provide for the issuance by a depositary to the public of receipts for depositary shares. Each depositary share will represent fractional interests of preferred stock. We will deposit the shares of preferred stock underlying the depositary shares under a deposit agreement between us and a bank or trust company selected by us. The bank or trust company must have its principal office in the United States and a combined capital and surplus of at least \$50 million. The depositary receipts will evidence the depositary shares issued under the deposit agreement.

The deposit agreement will contain terms applicable to the holders of depositary shares in addition to the terms stated in the depositary receipts. Each owner of depositary shares will be entitled to all the rights and preferences of the preferred stock underlying the depositary shares in proportion to the applicable fractional interest in the underlying shares of preferred stock. The depositary will issue the depositary receipts to individuals purchasing the fractional interests in shares of the related preferred stock according to the terms of the offering described in a prospectus supplement.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions received for the preferred stock to the entitled record holders of depositary shares in proportion to the number of depositary shares that the holder owns on the relevant record date. The depositary will distribute only an amount that can be distributed without attributing to any holder of depositary shares a fraction of one cent. The depositary will add the undistributed balance to and treat it as part of the next sum received by the depositary for distribution to holders of depositary shares.

If there is a non-cash distribution, the depositary will distribute property received by it to the entitled record holders of depositary shares, in proportion, insofar as possible, to the number of depositary shares owned by the holders, unless the depositary determines, after consultation with us, that it is not feasible to make such distribution. If this occurs, the depositary may, with our approval, sell such property and distribute the net proceeds from the sale to the holders. The deposit agreement also will contain provisions relating to how any subscription or similar rights that we may offer to holders of the preferred stock will be available to the holders of the depositary shares.

Conversion, Exchange, Redemption and Liquidation

If any series of preferred stock underlying the depositary shares may be converted or exchanged, each record holder of depositary receipts will have the right or obligation to convert or exchange the depositary shares represented by the depositary receipts.

The terms on which the depositary shares relating to the preferred stock of any series may be redeemed, and any amounts distributable upon our liquidation, dissolution or winding up, will be described in the relevant prospectus supplement.

Table of Contents

Voting

When the depositary receives notice of a meeting at which the holders of the preferred stock are entitled to vote, the depositary will mail the particulars of the meeting to the record holders of the depositary shares. Each record holder of depositary shares on the record date may instruct the depositary on how to vote the shares of preferred stock underlying the holder's depositary shares. The depositary will try, if practical, to vote the number of shares of preferred stock underlying the depositary shares according to the instructions. We will agree to take all reasonable action requested by the depositary to enable it to vote as instructed.

Amendments

We and the depositary may agree to amend the deposit agreement and the depositary receipt evidencing the depositary shares. Any amendment that (a) imposes or increases certain fees, taxes or other charges payable by the holders of the depositary shares as described in the deposit agreement or that (b) otherwise prejudices any substantial existing right of holders of depositary shares, will not take effect until 30 days after the depositary has mailed notice of the amendment to the record holders of depositary shares. Any holder of depositary shares that continues to hold its shares at the end of the 30-day period will be deemed to have agreed to the amendment.

Termination

We may direct the depositary to terminate the deposit agreement by mailing a notice of termination to holders of depositary shares at least 30 days prior to termination. In addition, a deposit agreement will automatically terminate if:

the depositary has redeemed all related outstanding depositary shares, or

we have liquidated, terminated or wound up our business and the depositary has distributed the preferred stock of the relevant series to the holders of the related depositary shares.

Payment of Fees and Expenses

We will pay all fees, charges and expenses of the depositary, including the initial deposit of the preferred stock and any redemption of the preferred stock. Holders of depositary shares will pay transfer and other taxes and governmental charges and any other charges as are stated in the deposit agreement for their accounts.

Resignation and Removal of Depositary

At any time, the depositary may resign by delivering notice to us, and we may remove the depositary. Resignations or removals will take effect upon the appointment of a successor depositary and its acceptance of the appointment. The successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having a combined capital and surplus of at least \$50 million.

Reports

The depositary will forward to the holders of depositary shares all reports and communications from us that are delivered to the depositary and that we are required by law, the rules of an applicable securities exchange or our restated certificate of incorporation to furnish to the holders of the preferred stock. Neither we nor the depositary will be liable if the depositary is prevented or delayed by law or any circumstances beyond its control in performing its obligations under the deposit agreement. The deposit agreement limits our obligations and the depositary's obligations to performance in good faith of the duties stated in the deposit agreement. Neither we nor the depositary

Table of Contents

will be obligated to prosecute or defend any legal proceeding connected with any depositary shares or preferred stock unless the holders of depositary shares requesting us to do so furnish us with satisfactory indemnity. In performing our obligations, we and the depositary may rely upon the written advice of our counsel or accountants, on any information that competent people provide to us and on documents that we believe are genuine.

DESCRIPTION OF COMMON STOCK

This section describes the general terms and provisions of the shares of our common stock, par value \$0.001 per share. This description is only a summary and is qualified in its entirety by reference to the description of our common stock incorporated by reference in this prospectus. Our restated certificate of incorporation and our bylaws have been filed as exhibits to our periodic reports filed with the SEC, which are incorporated by reference in this prospectus. You should read our restated certificate of incorporation and our bylaws for additional information before you buy any of our common stock or other securities. See "Where You Can Find More Information."

We have 125,000,000 shares of authorized common stock. As of May 1, 2015, there were 27,462,532 shares of common stock issued and outstanding. Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. We have not provided for cumulative voting for the election of directors in our restated certificate of incorporation. This means that the holders of a majority of the shares voted can elect all of the directors then standing for election. Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of assets legally available at the times and in the amounts that our board of directors may determine from time to time. Upon our liquidation, dissolution or winding-up, the holders of common stock are entitled to share ratably in all assets remaining after payment of all liabilities and the liquidation preferences of any outstanding preferred stock. Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable.

Registration Rights

As of May 1, 2015, the holders of approximately 13,956,090 shares of our common stock are entitled to contractual rights to require us to register those shares under the Securities Act of 1933. These rights are provided under the terms of our amended and restated investor rights agreement. We will pay all expenses relating to any such registration, other than underwriting discounts and selling commissions. The registration rights terminate upon the earlier of October 29, 2016, a change of control, or with respect to the registration rights of an individual holder, when that holder can sell all of the holder's shares covered by registration rights pursuant to Rule 144 under the Securities Act in any 90-day period.

Demand Registration Rights. Subject to limitations and conditions specified in the investor rights agreement, holders of a majority of the shares covered by registration rights may require us to prepare and file a registration statement under the Securities Act covering all shares they request that we register. We are not obligated to effect more than two of these stockholder-initiated registrations. Holders of shares having registration rights may also require us to file up to two additional registration statements on Form S-3 or similar short-form registration statement, if we are eligible to use Form S-3 or similar short-form registration statement, and the value of the securities to be registered is at least \$1,500,000.

Piggyback Registration Rights. If we propose to register any of our securities under the Securities Act either for our own account or for the account of other stockholders, the holders of shares having

Table of Contents

registration rights will, subject to certain exceptions, be entitled to include their shares in our registration statement. These piggyback registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration statement under certain circumstances, but not below 25% of the total number of shares covered by the registration statement.

In connection with the sale of 4,907,975 shares of common stock in a private placement, we and certain investors entered into a Registration Rights Agreement dated as of April 22, 2015, pursuant to which we have registered for resale the shares of common stock issued in the private placement.

Anti-Takeover Effects of Delaware Law and Our Restated Certificate of Incorporation and Bylaws

Certain provisions of Delaware law, our restated certificate of incorporation and our amended and restated bylaws 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. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to first negotiate with our board of directors.

Certificate of Incorporation and Bylaws. Our restated certificate of incorporation and amended and restated bylaws include provisions that:

authorize our board of directors to issue, without further action by the stockholders, up to 5,000,000 shares of undesignated preferred stock;

require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;

specify that special meetings of our stockholders can be called only by our board of directors, our chairman of the board, or our chief executive officer;

establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;

establish that our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered terms;

provide that our directors may be removed only for cause;

provide that vacancies on our board of directors may, except as otherwise required by law, be filled only by a majority of directors then in office, even if less than a quorum;

specify that no stockholder is permitted to cumulate votes at any election of directors; and

require a super-majority of votes to amend certain of the above-mentioned provisions.

Delaware Law. We are subject to the provisions of Section 203 of the General Corporation Law of the State of Delaware regulating corporate takeovers. In general, those provisions prohibit a publicly-held Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless:

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the transaction is approved by the board of directors of the corporation before the date the interested stockholder attained that status;

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

Table of Contents

corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding (1) shares owned by persons who are directors and also officers and (2) shares owned by 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 exchange offer; or

on or after the date the business combination is approved by the board of directors of the corporation and authorized at a meeting of stockholders by at least 66-2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines "business combination" to include the following:

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

any sale, transfer, pledge or other disposition 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 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.

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 any of these entities or persons.

A Delaware corporation may opt out of these provisions either with an express provision in its original certificate of incorporation or in an amendment to its certificate of incorporation or bylaws approved by its stockholders. However, we have not opted out, and do not currently intend to opt out of, these provisions. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us.

Transfer Agent

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of debt securities, preferred stock, common stock, depository shares, or any combination thereof. We may issue warrants independently or together with any other securities offered by any prospectus supplement and may be attached to or separate from the other offered securities. Each series of warrants may be issued under a separate warrant agreement to be entered into by us with a warrant agent. The applicable warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. Further terms of the warrants and the applicable warrant agreements will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement relating to any particular issue of warrants will describe the terms of the warrants, including, as applicable, the following:

the title of the warrants;

Table of Contents

the aggregate number of the warrants;

the price or prices at which the warrants will be issued;

the designation, terms and number of shares of debt securities, preferred stock or common stock purchasable upon exercise of the warrants;

the designation and terms of the offered securities, if any, with which the warrants are issued and the number of the warrants issued with each offered security;

the date, if any, on and after which the warrants and the related debt securities, preferred stock or common stock will be separately transferable;

the price at which each share of debt securities, preferred stock or common stock purchasable upon exercise of the warrants may be purchased;

the date on which the right to exercise the warrants shall commence and the date on which that right shall expire;

the minimum or maximum amount of the warrants which may be exercised at any one time;

information with respect to book-entry procedures, if any;

a discussion of certain federal income tax considerations; and

any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

We and the applicable warrant agent may amend or supplement the warrant agreement for a series of warrants without the consent of the holders of the warrants issued thereunder to effect changes that are not inconsistent with the provisions of the warrants and that do not materially and adversely affect the interests of the holders of the warrants.

DESCRIPTION OF RIGHTS

We may issue rights to purchase common stock or preferred stock. This prospectus and any accompanying prospectus supplement will contain the material terms and conditions for each right. The accompanying prospectus supplement may add, update or change the terms and conditions of the rights as described in this prospectus.

We will describe in the applicable prospectus supplement the terms and conditions of the issue of rights being offered, the rights agreement relating to the rights and the rights certificates representing the rights, including, as applicable:

the title of the rights;

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the date of determining the stockholders entitled to the rights distribution;

the title, aggregate number of shares of common stock or preferred stock purchasable upon exercise of the rights;

the exercise price;

the aggregate number of rights issued;

the date, if any, on and after which the rights will be separately transferable;

the date on which the right to exercise the rights will commence and the date on which the right will expire; and

Table of Contents

any other terms of the rights, including terms, procedures and limitations relating to the distribution, exchange and exercise of the rights.

Each right will entitle the holder of rights to purchase for cash the principal amount of shares of common stock or preferred stock at the exercise price provided in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement. After the close of business on the expiration date, all unexercised rights will be void.

Holders may exercise rights as described in the applicable prospectus supplement. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the shares of common stock or preferred stock purchasable upon exercise of the rights. If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than stockholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting arrangements, as described in the applicable prospectus supplement.

SELLING STOCKHOLDERS

This prospectus also relates to the possible resale by some of our stockholders of up to an aggregate of 5,000,000 shares of our common stock that were issued and outstanding prior to the original date of filing of the registration statement of which this prospectus forms a part and may include shares acquired by our directors or entities affiliated with our directors that were issued in one or more of the following transactions: We sold shares of our series A, series B and series C preferred stock in private placements to accredited investors, including some of our directors, executive officers and entities affiliated with our directors, in December 2006, January 2007, June 2007, February 2008, August 2009, June 2010, February 2011, July 2011, November 2012 and June 2013. All outstanding shares of our preferred stock were converted to shares of our common stock in connection with the closing of our initial public offering in November 2013.

The selling stockholders may be our directors or entities affiliated with our directors. The prospectus supplement for any offering of common stock by selling stockholders will include the following information:

the names of the selling stockholders;

the nature of any position, office or other material relationship each selling stockholder has had within the last three years with us or any of our predecessors or affiliates;

the number of shares held by each of the selling stockholders before and after the offering;

the percentage of common stock held by each of the selling stockholders before and after the offering; and

the number of shares of common stock offered by each of the selling stockholders.

Selling stockholders may not sell any shares of our common stock pursuant to this prospectus until we have identified those selling stockholders and the shares being offered for resale by those selling stockholders in a subsequent prospectus supplement. However, the selling stockholders may sell or transfer all or a portion of their shares of our common stock pursuant to any available exemption from the registration requirements of the Securities Act of 1933.

Table of Contents

PLAN OF DISTRIBUTION

Company Distributions

We may sell the securities offered by this prospectus to one or more underwriters or dealers for public offering and sale by them or to investors directly or through agents. The accompanying prospectus supplement will set forth the terms of the offering and the method of distribution and will identify any firms acting as underwriters, dealers or agents in connection with the offering, including:

the name or names of any underwriters, dealers or agents;

the purchase price of the securities and the proceeds to us from the sale;

any underwriting discounts and other items constituting compensation to underwriters, dealers or agents;

any public offering price;

any discounts or concessions allowed or reallocated or paid to dealers; and

any securities exchange or market on which the securities offered in the prospectus supplement may be listed.

Only those underwriters identified in such prospectus supplement are deemed to be underwriters in connection with the securities offered in the prospectus supplement.

The distribution of the securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, or at prices determined as the applicable prospectus supplement specifies. The securities may be sold through an at-the-market offering, a rights offering, forward contracts or similar arrangements. In addition, we may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

In connection with the sale of the securities, underwriters, dealers or agents may be deemed to have received compensation from us in the form of underwriting discounts or commissions and also may receive commissions from securities purchasers for whom they may act as agent. Underwriters may sell the securities to or through dealers, and the dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agent.

We will provide in the applicable prospectus supplement information regarding any underwriting discounts or other compensation that we pay to underwriters or agents in connection with the securities offering, and any discounts, concessions or commissions that underwriters allow to dealers. Underwriters, dealers and agents participating in the securities distribution may be deemed to be underwriters, and any discounts, commissions or concessions they receive and any profit they realize on the resale of the securities may be deemed to be underwriting discounts and commissions under the

Table of Contents

Securities Act of 1933. Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act. Some of the underwriters, dealers or agents who participate in the securities distribution may engage in other transactions with, and perform other services for, us or our subsidiaries in the ordinary course of business.

Our common stock is currently listed on The NASDAQ Global Market, but any other securities may or may not be listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

Selling Stockholder Distributions

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

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;

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

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

privately negotiated transactions;

short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the SEC;

through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;

broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share; and

a combination of any such methods of sale.

Table of Contents

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock 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, under this prospectus, or under an amendment or supplement to this prospectus amending 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 the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act. Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us and the selling stockholders, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, and any applicable discounts, commissions, concessions or other compensation with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

To facilitate the offering of the shares offered by the selling stockholders, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. This may include over-allotments or short sales, which involve the sale by persons participating in the offering of more shares than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the common stock by bidding for or purchasing shares in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may

Table of Contents

be reclaimed if shares sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the common stock at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

LEGAL MATTERS

The validity of any securities offered by this prospectus will be passed upon for us by Pillsbury Winthrop Shaw Pittman LLP, San Francisco and Palo Alto, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements as of and for the year ended December 31, 2014 included in our Annual Report on Form 10-K for the year ended December 31, 2014, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our consolidated financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

The financial statements as of December 31, 2013 and for each of the two years in the period ended December 31, 2013 incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2014 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The audited historical financial statements of Allegro Diagnostics Corp. included in Veracyte, Inc.'s Current Report on Form 8-K/A dated September 16, 2014 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 1 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-3 with the SEC under the Securities Act of 1933. This prospectus is part of the registration statement but the registration statement includes and incorporates by reference additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement and any other document we file with the SEC at the public reference room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a web site that contains reports, proxy and information statements and other information regarding companies, such as ours, that file documents electronically with the SEC. The address of that site on the world wide web is <http://www.sec.gov>. The information on the SEC's web site is not part of this prospectus, and any references to this web site or any other web site are inactive textual references only.

The SEC permits us to "incorporate by reference" the information contained in documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus. Information that is incorporated by reference is considered to be part of this prospectus and you should read it with the same care that you read this prospectus. Later information that we file with the SEC will automatically update and supersede the information that is either contained, or incorporated by reference, in this prospectus, and

Table of Contents

will be considered to be a part of this prospectus from the date those documents are filed. We have filed with the SEC, and incorporate by reference in this prospectus:

our Annual Report on Form 10-K for the year ended December 31, 2014;

our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015;

our Current Reports on Form 8-K filed with the SEC on September 17, 2014 (as amended on November 6, 2014, December 10, 2014, and May 21, 2015); January 12, 2015, March 5, 2015, March 13, 2015, March 31, 2015, April 7, 2015, April 24, 2015, May 1, 2015 and May 19, 2015; and

the description of our common stock contained in our Registration Statement on Form 8-A filed on October 28, 2013, including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference all additional documents that we file with the SEC under the terms of Section 13(a), 13(c), 14 or 15(d) of the Exchange Act that are made after the initial filing date of the registration statement of which this prospectus is a part and the effectiveness of the registration statement, as well as between the date of this prospectus and the termination of any offering of securities offered by this prospectus. We are not, however, incorporating, in each case, any documents or information that we are deemed to furnish and not file in accordance with SEC rules.

You may request a copy of any or all of the documents incorporated by reference but not delivered with this prospectus, at no cost, by writing or telephoning us at the following address and number: Investor Relations, Veracyte, Inc., 7000 Shoreline Court, Suite 250, South San Francisco, California 94080, telephone (650) 243-6300. We will not, however, send exhibits to those documents, unless the exhibits are specifically incorporated by reference in those documents.

Table of Contents

5,000,000 Shares

Common Stock

Leerink Partners

BTIG

November 1, 2016
