

Accelerate Diagnostics, Inc
Form 424B5
December 08, 2015
Table of Contents

Filed Pursuant to Rule 424(b)(5)
Registration No. 333-192321

The information in this preliminary prospectus supplement is not complete and may be changed. Neither this preliminary prospectus supplement nor the accompanying prospectus is an offer to sell these securities, and we are not soliciting an offer to buy these securities, in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated December 8, 2015

Preliminary prospectus supplement

(To prospectus dated December 10, 2013)

\$80,000,000

Common stock

We are offering \$80,000,000 of shares of our common stock.

Our common stock is listed on The NASDAQ Capital Market under the symbol AXDX. On December 7, 2015, the last reported sale price of our common stock on The NASDAQ Capital Market was \$17.16 per share. Based on an assumed public offering price of \$17.16 per share, the last reported sale price of our common stock on The NASDAQ Capital Market on December 7, 2015, we would expect to offer approximately 4.7 million shares hereby.

| | Per share | Total |
|--|------------------|--------------|
| Public offering price | \$ | \$ |
| Underwriting discounts and commissions(1) | \$ | \$ |
| Proceeds to Accelerate Diagnostics, Inc. before expenses | \$ | \$ |

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

We have granted the underwriters an option for a period of 30 days to purchase up to \$12 million of additional shares of our common stock.

Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page S-8 of this prospectus supplement.

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.

Certain of our affiliates, including entities affiliated with one of our directors, Jack Schuler, and which together are our largest stockholders, have indicated an interest in purchasing an aggregate of up to \$50 million of the shares of our common stock offered hereby at the public offering price. Because these indications of interest are not binding agreements or commitments to purchase, any or all of these entities may elect not to purchase any shares in this offering, or the underwriters may elect not to sell any shares in this offering to any or all of these entities. Any shares sold to such affiliates will be subject to the lock-up agreements described under Underwriting. The underwriters will not receive any underwriting discount or commissions on the shares of our common stock purchased by such affiliates in this offering with regard to up to \$40 million of the shares sold to such affiliates.

The underwriters expect to deliver the shares of common stock to purchasers on or about December , 2015.

J.P. Morgan

Piper Jaffray

William Blair

BTIG

December , 2015

Table of Contents**Table of contents**

| Prospectus supplement | Page |
|--|-------------|
| <u>About this prospectus supplement</u> | S-1 |
| <u>Prospectus supplement summary</u> | S-2 |
| <u>Risk factors</u> | S-8 |
| <u>Forward-looking statements</u> | S-33 |
| <u>Use of proceeds</u> | S-34 |
| <u>Price range of common stock</u> | S-35 |
| <u>Dividend policy</u> | S-35 |
| <u>Capitalization</u> | S-36 |
| <u>Material U.S. federal income tax considerations</u> | S-37 |
| <u>Underwriting</u> | S-41 |
| <u>Legal matters</u> | S-46 |
| <u>Experts</u> | S-46 |
| <u>Where you can find more information</u> | S-46 |
| <u>Important information incorporated by reference</u> | S-47 |
| Prospectus | Page |
| <u>About this prospectus</u> | 1 |
| <u>Prospectus summary</u> | 2 |
| <u>Risk factors</u> | 4 |
| <u>Forward-looking statements</u> | 4 |
| <u>Use of proceeds</u> | 4 |
| <u>Dividend policy</u> | 5 |
| <u>Description of our capital stock</u> | 5 |
| <u>Description of the debt securities</u> | 7 |
| <u>Description of the warrants</u> | 17 |
| <u>Description of the units</u> | 18 |
| <u>Plan of distribution</u> | 18 |
| <u>Legal matters</u> | 21 |
| <u>Experts</u> | 21 |
| <u>Where you can find more information</u> | 21 |
| <u>Information incorporated by reference</u> | 22 |

Table of Contents

About this prospectus supplement

This document contains two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference. 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, the accompanying prospectus and any related free writing prospectus provided or approved by us. We have not, and the underwriters have not, authorized any person to provide you with other or additional information. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted.

You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, any related free writing prospectus and the documents incorporated by reference are accurate only as of the respective dates of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates, and neither the delivery of this prospectus supplement and the accompanying prospectus nor any sale hereunder shall, under any circumstances, create any implication to the contrary.

Before you invest in our common stock, you should carefully read the registration statement described in the accompanying prospectus (including the exhibits thereto) of which this prospectus supplement and the accompanying prospectus form a part, this prospectus supplement, the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. See the sections entitled [Where you can find more information](#) and [Important information incorporated by reference](#) in this prospectus supplement.

Table of Contents**Prospectus supplement summary**

*This summary highlights certain information contained in greater detail elsewhere in this prospectus supplement or the accompanying prospectus, or incorporated by reference herein or therein. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our securities. You should carefully read this prospectus supplement, the accompanying prospectus, any related free writing prospectus that we have authorized for use in connection with this offering and the documents incorporated by reference, including the information referred to under the heading *Risk factors* in this prospectus supplement and under the heading *Risk factors* contained in the accompanying prospectus or in the documents incorporated by reference. Unless the context requires otherwise, all references in this prospectus to the Company, Accelerate, we, us, our or similar references mean Accelerate Diagnostics, Inc. together with its consolidated subsidiaries.*

Our company

Accelerate Diagnostics, Inc. is an *in vitro* diagnostics company dedicated to providing solutions that improve patient outcomes and lower healthcare costs through the rapid diagnosis of serious infections. Microbiology laboratories are in need of new tools to address what the U.S. Centers for Disease Control and Prevention calls one of the most serious healthcare threats of our time, antibiotic resistance. A significant contributing factor to the rise of resistance is the overuse and misuse of antibiotics, which is exacerbated by a lack of timely diagnostic results. The delay of these results is often due to the reliance by microbiology laboratories on traditional culture-based tests that often take two to three days to complete. Our technology platform is built to address these challenges by delivering significantly faster and accurate testing of infectious pathogens in various patient sample types.

Since 2004, we have focused our efforts on the development of an innovative rapid diagnostic platform, the Accelerate ID/AST System, which we refer to as the ID/AST System or Accelerate ID/AST System, intended for the rapid diagnosis of infectious pathogens. Our goal is to reduce the failure rate of initial antibiotic drug therapy by shortening lab turnaround time to hours rather than the two to three days now required to deliver identification and susceptibility results. In our recent multicenter pilot study, the ID/AST System produced an identification result in approximately 75 minutes after presenting the patient sample to the system, with antibiotic susceptibility testing available about five hours later. Based on preclinical work, we believe antibiotic susceptibility testing results for the clinical product will be available between approximately three and five hours after the presentation of the identification result, depending on the type of bacteria being tested. Blood culture is a routine laboratory process which determines negative from positive samples through incubation, which we estimate takes on average approximately 12 hours to complete.

The ID/AST System utilizes genotypic technology to identify, or ID, infectious pathogens and phenotypic technology to conduct antibiotic susceptibility testing, or AST, which determines whether live bacterial cells are resistant or susceptible to a particular antibiotic. The ID/AST blood culture assay kit, which we refer to as the Blood Culture Assay Kit, is being investigated for its ability to provide ID and AST results for patients suspected of bacteremia or fungemia, both life-threatening conditions with high morbidity and mortality risk. The Blood Culture Assay Kit consists of a highly multiplexed panel of more than 150 individual assays which have the potential to support clinicians in prescribing optimal antibiotic therapy for patients in this critical condition. The final number of assays included in the Blood Culture Assay Kit will depend on the results of our upcoming trial to support marketing authorization from the U.S. Food and Drug Administration (FDA) and FDA review of each individual assay for marketing authorization. This panel is designed to cover over 80% of the routine and

Table of Contents

significant pathogens causing blood stream infections and over 90% of the antibiotics useful in treating those pathogens. On June 30, 2015, we declared our conformity to the European *In Vitro* Diagnostic Directive 98/79 EC and applied a CE Mark to the Accelerate ID/AST System and the Blood Culture Assay Kit for *in vitro* diagnostic use.

We anticipate commercializing the Accelerate ID/AST System in the United States, subject to the successful completion of the U.S. registration trial and submission to and grant by the FDA of a *de novo* classification request for the ID/AST System, which could occur as early as the third quarter of 2016. See Recent developments below for a description of the results from our recent multicenter pilot study and more information regarding our upcoming trial to support marketing authorization from the FDA.

Clinical need

Antibiotic resistance has a significant healthcare impact, costing the U.S. healthcare system an estimated \$55 billion per year. This estimate includes \$20 billion in direct costs and \$35 billion in indirect costs, such as lost productivity and sick days. Increasing infection rates and misuse of antibiotics results in serious treatment complications. Recent studies have shown that the number of hospital-acquired infections in the United States ranges from 214,700 to 1,411,000 per year, contributing to an estimated 75,000 deaths per year. Moreover, inappropriate antibiotic use is widespread. Of the 33 million patients admitted to U.S. hospitals each year, 56% (19 million) are put on empiric antibiotic therapy, of which more than half (9 million) are on inappropriate or unnecessary antibiotics.

Rapid AST is designed to address these challenges. According to a recent company survey of 43 critical care physicians, 95% stated that AST is the most valuable lab test when selecting optimal antibiotic therapy. Studies have shown that even a modest decrease in the time it takes to deliver an AST result correlates to reduced length and cost of hospital stay per patient. One such study showed that a five hour reduction in the time to receive an AST result delivered a two-day reduction in length of stay and a reduction in patient treatment costs of \$1,750 per patient. Based on our conversations with potential customers and review of internal time studies, we estimate that the Blood Culture Assay Kit will reduce the time to receive an AST result from the time a sample is taken from a patient by a total of 29 hours on average for the Blood Culture Assay Kit and 52 hours on average for the respiratory kit, which is currently in the initial stages of development. Based on our analysis, we estimate that the ID/AST System is capable of delivering results in approximately 19 hours from the time a blood sample is taken from a patient, while current solutions take a total of approximately 48 hours to deliver results. For respiratory samples, we estimate that the ID/AST System is capable of delivering results in approximately 8 hours from the time a sample is taken from a patient, while current solutions take a total of approximately 60 hours to deliver results.

Market opportunity

Recent reports have indicated estimated growth in the hospital-acquired disease testing market, a subset of the microbiology market in which we operate, at a combined average growth rate of 19.3% over seven years, from \$2.2 billion in 2012 to an estimated \$7.5 billion by 2019. We believe this growth is driven by the entrance of new technologies coupled with higher volumes due to enhanced screening, immune-compromised patients and increasing challenges with multidrug-resistant organisms.

Initially, we plan on marketing our system across three regions: North America, Europe and various countries in the Asia Pacific region. In these geographies, we estimate there are over 14 million high-acuity tests completed annually across various sample types including blood, respiratory, skin and soft tissue, and urine. We estimate

Table of Contents

there are 5 million high-acuity tests annually for blood culture samples globally, including over 4 million in North America, Europe and various countries in the Asia Pacific region. Based on this estimated test volume, and an estimated current market price per test of approximately \$180, we estimate the total available market of automated microbiological testing to be approximately \$2.5 billion annually in North America, Europe and various countries in the Asia Pacific region, of which approximately \$725 million is attributed to high-acuity tests for blood culture samples.

In addition, based on information compiled from various competitor annual reports and other publicly available information, as well as our own estimates, we believe there are nearly 20,000 global instrument placements possible, consisting of approximately 10,000 bioMerieux Vitek 2 installations, 6,000 Danaher Microscan installations and 4,000 instruments from other companies. Based on this estimated total instrument placement volume, and an estimated average price of an instrument sold for use in the microbiology lab today of approximately \$100,000, we estimate the total available global instrument market for the ID/AST System to be approximately \$2.0 billion.

Certain recent government initiatives are complementary to the ID/AST System. Centers for Medicare and Medicaid Services (CMS) programs to decrease hospital-acquired infections directly impact hospital budgets via reimbursement cuts, incentivizing providers to enhance infection-management protocols. These programs include the Medicare Hospital-Acquired Condition Reduction Program and the Hospital Readmissions Reduction Program. Similarly, on March 27, 2015, the White House released the National Action Plan for Combating Antibiotic-Resistant Bacteria, which directly and indirectly promotes rapid susceptibility testing. The plan identifies several milestones to accomplish this goal, such as calling on the National Institutes of Health to fund new projects and provide prizes aimed at the development of rapid diagnostic tests that characterize antibiotic susceptibility and improve antibiotic stewardship; mandated implementation of antibiotic stewardship programs by all hospitals participating in Medicare and Medicaid, to go into effect within three years; and FDA and CMS 's evaluation of new regulatory pathways to promote development and adoption of innovative infectious disease diagnostics.

Our commercial strategy is to focus initially on high volume and influential accounts in key geographies with a direct sales force in North America and in select European countries. Early marketing efforts include the planned initiation of 12 market study sites across the United States and European Union. In support of these efforts, we anticipate establishing an initial sales force of eight to 12 employees based in the European Union and 17 to 23 employees based in the United States. We may also use third-party distribution partners for certain geographic areas outside of the United States.

Research and development

We plan to introduce additional test kits for use on the Accelerate ID/AST System to enable its use with other sample types (*e.g.*, respiratory samples, skin, soft tissue and urine). In addition, we plan to invest in the development of additional instruments, tests and other microbiology solutions.

Competition

To the best of our knowledge, no other company has a single product with capabilities matching all those of the ID/AST System. The leading companies with automated microbiological testing products include Becton, Dickinson and Company (BD), bioMerieux, Danaher Corporation (Danaher), Bruker Corporation, BioFire Diagnostics, Nanosphere, T2 Biosystems, Abbott and Thermo Fisher Scientific 's subsidiary TREK Diagnostics Systems, Inc. (TREK). These companies provide products for the broad-based culturing and analysis of a wide variety of

Table of Contents

bacteria. However, only BD, bioMerieux, Danaher and TREK market products that perform AST, and none of our competitors' products are able to provide AST results as quickly as the ID/AST System is expected to provide results.

Our competitors' AST products require purified bacterial strains or isolates for analysis, which require at least overnight culturing of a sample to produce enough organisms to test. Systems which rely on these standard culturing methods, including enrichment growth and colony isolation, cannot achieve the speed that the ID/AST System is expected to provide.

Recent developments

On December 2, 2015, we announced positive findings from a multicenter pilot study to evaluate external performance of our ID/AST System and Blood Culture Assay Kit. Based on the results of the pilot study, we also announced the initiation of a larger trial intended to support marketing authorization by the FDA.

The pilot study included ten external sites and the analysis of 146 fresh de-identified positive blood culture samples from patients and 127 samples seeded with challenging bacterial or fungal isolates. Enrollment for the pilot study followed a protocol similar to our larger upcoming trial to support marketing authorization from the FDA, which is planned to expand to 11 external clinical sites. Contingent upon successful completion of the larger trial, we plan to submit a request for *de novo* classification seeking marketing authorization for the Accelerate ID/AST System and Blood Culture Assay Kit.

Corporate information

Accelerate Diagnostics, Inc. is a corporation organized under the laws of the State of Delaware. Since 2004, we have focused on developing and commercializing innovative instrumentation for the rapid identification and antibiotic susceptibility testing of infectious pathogens. The Company currently conducts no other significant business activities. Our website address is www.acceleratediagnostics.com. None of the information contained on, or that may be accessed through, our website is a prospectus or constitutes part of, or is otherwise incorporated into, this prospectus.

Our common stock is listed on The NASDAQ Capital Market under the symbol AXDX. Our principal executive offices are located at 3950 South Country Club Road, Suite 470, Tucson, Arizona 85714, and our telephone number is (520) 365-3100.

Table of Contents

The offering

Common stock offered by us shares (or shares if the underwriters exercise their option to purchase additional shares in full)

Common stock outstanding immediately after the offering shares (or shares if the underwriters exercise their option to purchase additional shares in full)

Option to purchase additional shares We have granted the underwriters an option to purchase up to additional shares of our common stock. This option is exercisable, in whole or in part, for a period of 30 days from the date of this prospectus supplement.

Use of proceeds We intend to use the net proceeds of this offering for general corporate purposes. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. Accordingly, we will retain broad discretion over the use of these proceeds. See Use of proceeds.

NASDAQ Capital Market symbol AXDX

Risk factors Investing in our common stock involves a high degree of risk. See Risk factors beginning on page S-8 of this prospectus supplement for a discussion of material risks you should consider before investing in our common stock.

The number of shares of our common stock that will be outstanding immediately after this offering is based on 44,738,956 shares outstanding as of November 30, 2015, and excludes as of that date the following:

6,168,227 shares of our common stock issuable upon the exercise of outstanding stock options at a weighted-average exercise price of \$6.88 per share;

40,250 shares of restricted common stock awards which have not yet vested;

2,970,159 shares of our common stock reserved for future issuance under our 2012 Omnibus Equity Incentive Plan, as amended; and

an aggregate of 571,160 shares of our common stock issuable upon exercise of outstanding warrants at a weighted average exercise price of \$2.00 per share.

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

Certain of our affiliates, including entities affiliated with one of our directors, Jack Schuler, and which together are our largest stockholders, have indicated an interest in purchasing an aggregate of up to \$50 million of the shares of our common stock offered hereby at the public offering price. Because these indications of interest

Table of Contents

are not binding agreements or commitments to purchase, any or all of these entities may elect not to purchase any shares in this offering, or the underwriters may elect not to sell any shares in this offering to any or all of these entities. Any shares sold to such affiliates will be subject to the lock-up agreements described under Underwriting. The underwriters will not receive any underwriting discount or commissions on the shares of our common stock purchased by such affiliates in this offering with regard to up to \$40 million of the shares sold to such affiliates. Unless the context otherwise requires, all information in this prospectus supplement assumes \$50 million of the shares of our common stock offered hereby will be sold to such affiliates.

S-7

Table of Contents

Risk factors

Investing in our securities involves a high degree of risk. Please carefully consider the risk factors described below and all other information in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference and in any free writing prospectus that we have authorized for use in connection with this offering, before making an investment decision. The occurrence of any of those risks could materially and adversely affect our business, prospects, financial condition, results of operations or cash flow. Other risks and uncertainties that we do not now consider to be material or of which we are not now aware may become important factors that affect us in the future. Any of these risks could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section entitled "Forward-looking statements."

Risks related to our business and strategy

Our future profitability and continued existence is dependent in large part upon the successful final development and commercialization of the Accelerate ID/AST System and further development and commercialization of complimentary products.

Our principal business strategy involves the successful final development and commercialization of the Accelerate ID/AST System, associated test kits and the future development and commercialization of complimentary products. On June 30, 2015, we declared our conformity to the European *In Vitro* Diagnostic Directive 98/79 EC and CE Mark of the Accelerate ID/AST System and ID/AST Blood Culture Assay Kit for *in vitro* diagnostic use. We have dedicated a significant amount of resources to finalize the development of and prepare to market and sell the ID/AST System, and we plan to continue our investment in finalizing the development and commercialization of the ID/AST System in the United States and other jurisdictions in which we intend to pursue marketing authorization. There can be no assurance that we will successfully finalize the development of and commercialize the ID/AST System, associated Blood Culture Assay Kit, or further develop and commercialize complimentary products. We may be required to expend significantly more resources than planned in this process, and as a result we may have to cease investing in the ID/AST System or developing other products.

If we are not successful in the final development and commercialization of the ID/AST System, such failure could lead to impairment of certain of our intellectual property and may result in our ceasing operations.

Further, if we are not successful in conveying to hospitals that the ID/AST System provides equivalent or superior diagnostic information in a shorter period of time compared to existing technologies, or that the ID/AST System improves patient outcomes or decreases healthcare costs, we may experience reluctance from hospitals to order our product. If we fail to successfully commercialize the ID/AST System, we may never receive a return on the significant investments in product development, sales and marketing, regulatory compliance, manufacturing and quality assurance we have made and further investments we intend to make, and may fail to generate revenue and gain economies of scale from such investments.

Our product candidates have not obtained marketing authorization from the FDA, and they may never obtain such marketing authorization or other regulatory clearance.

Our success depends on our ability to obtain marketing authorization from the FDA or regulatory clearance of the ID/AST System and other product candidates in our pipeline. If our attempts to obtain marketing authorization or other regulatory clearance are unsuccessful, we may be unable to generate sufficient revenue to sustain and grow our business. Our future product candidates may not be sufficiently sensitive or specific, or may prove to have other characteristics that preclude our obtaining, marketing authorization from the FDA or

Table of Contents

regulatory clearance. The process of obtaining regulatory clearance is expensive and time-consuming and can vary substantially based upon, among other things, the type, complexity and novelty of our product candidates. Changes in regulatory policy, changes in or the enactment of additional statutes or regulations or changes in regulatory review for each submitted product application may cause delays in the clearance of, or receipt of marketing authorization from the FDA for, a product candidate or rejection of a regulatory application altogether. The FDA has substantial discretion in the *de novo* review and clearance processes and may refuse to accept any application or may decide that our data are insufficient for clearance and require additional pre-clinical, clinical or other studies. In addition, varying interpretations of the data obtained from pre-clinical and clinical testing could delay, limit or prevent marketing authorization from the FDA or regulatory clearance of a product candidate. Furthermore, the FDA may not provide marketing authorization for all of the individual assays of our Blood Culture Assay Kit. Any marketing authorization from the FDA or regulatory clearance we ultimately obtain may be limited or subject to restrictions or post-market commitments that render the product candidate not commercially viable.

If we do not achieve our projected development goals in the time frames we announce and expect, the commercialization of our products may be delayed and, as a result, our stock price may decline.

From time to time, we estimate the timing of the accomplishment of various scientific, clinical, regulatory and other product development goals. These goals may include the commencement or completion of clinical trials and the submission of regulatory filings. From time to time, we may publicly announce the expected timing of some of these goals. For example, in this prospectus supplement, we state that, contingent upon successful completion of the larger trial, we plan to submit a *de novo* classification request seeking marketing authorization for the Accelerate ID/AST System and Blood Culture Assay Kit, and that we anticipate commercializing the Accelerate ID/AST System in the United States, subject to the successful completion of the U.S. registration trial and submission and grant by the FDA of our *de novo* classification request for the ID/AST System, which could occur as early as the third quarter of 2016. All of these goals are, and will be, based on a variety of assumptions. The actual timing of these goals can vary significantly compared to our estimates, in some cases for reasons beyond our control. We may experience numerous unforeseen events that could delay or prevent our ability to receive marketing approval or commercialize our product candidates, including the uncertainties and risks set forth in these risk factors. If we do not meet our goals as publicly announced, the commercialization of our product candidates may be delayed and, as a result, our stock price may decline.

Although we announced positive findings from our recently completed pilot study, there is no guarantee that our larger trial to support marketing authorization from the FDA will have similar results.

On December 2, 2015, we announced positive findings from a multicenter pilot study to evaluate external performance of our ID/AST System and Blood Culture Assay Kit. Based on the results of the pilot study, we also announced the initiation of a larger trial intended to support marketing authorization by the FDA. There is no guarantee that the larger upcoming trial to support marketing authorization from the FDA will achieve similar results. If the larger trial does not achieve the results required to support marketing authorization from the FDA, we may be required to further develop our ID/AST System and Blood Culture Assay Kit and the commercialization of our technology would be delayed or may never be achieved, and, as a result, our stock price may decline.

We may not be able to enhance the capabilities of our current and new products to keep pace with our industry's rapidly changing technology and customer requirements.

Our industry is characterized by rapid technological changes, frequent new product introductions and enhancements and evolving industry standards. Our future success will depend significantly on our ability to enhance our current products and develop or acquire and market new products that keep pace with technological developments and evolving industry standards as well as respond to changes in customer needs.

Table of Contents

New technologies, techniques or products could emerge that might offer better combinations of price and performance than the products and systems that we plan to sell. It is critical to our success that we anticipate changes in technology and customer requirements and physician, hospital and healthcare provider practices and successfully introduce new, enhanced and competitive technologies to meet our prospective customers' needs on a timely and cost-effective basis. At the same time, however, we must carefully manage our introduction of new products. If potential customers believe that such products will offer enhanced features or be sold for a more attractive price, they may delay purchases until such products are available.

We are developing additional uses for the ID/AST System. Any failure or delay in launching new applications may compromise our ability to achieve our growth objectives.

We are developing additional uses for the ID/AST System, including the ability to test on additional specimen types (e.g., respiratory samples, skin and soft tissue and urine). We may have problems applying our technologies to additional specimen types, and our new applications may not be as effective in detection as our initial applications. We may also encounter difficulties obtaining marketing authorization or regulatory clearance for additional uses of the ID/AST System. Any failure or delay in launching new applications may compromise our ability to achieve our growth objectives.

There can be no assurance that we will be successful in developing or acquiring product enhancements or new products to address changing technologies and customer requirements adequately, that we can introduce such products on a timely basis or that any such products or enhancements will be successful in the marketplace. If we are unable to successfully develop or acquire new products or if the market does not accept our products, or if we experience difficulties or delays in the final development and commercialization of our products, including the ID/AST System, we may be unable to attract additional customers for our products or license our products to other strategic partners.

The failure of the ID/AST System or any future diagnostic products to perform as expected could significantly impair our reputation and the public image of our products, and we may be subject to legal claims arising from any defects or errors.

Our success will depend on the market's confidence that our technologies can provide reliable, high-quality diagnostic results. We believe that our customers are likely to be particularly sensitive to any defects or errors in the ID/AST System. If we experience disruptions or other performance problems with the ID/AST System or any future diagnostic product, we could face warranty and liability claims against us or our reputation could suffer as a result of such failures. We cannot assure you that our product liability insurance would adequately protect our assets from the financial impact of defending a product liability claim. Any product liability claim brought against us, with or without merit, could increase our product liability insurance rates or prevent us from securing insurance coverage in the future. In addition, the FDA and similar foreign governmental authorities have the authority to require the recall of commercialized products in the event of material deficiencies or defects in design or manufacture of a product or in the event that a product poses an unacceptable risk to health. A recall, material liability claim or other occurrence that harms our reputation or decreases market acceptance of our products could cause us to incur significant costs, divert the attention of our key personnel or cause other significant customer relations problems.

We have limited revenues from our products and no assurance of future revenues.

We have received limited revenue from sales based on products using our OptiChem technology, and we are in the process of discontinuing our efforts to develop and actively market OptiChem and our other surface chemistry products. During the nine-month period ended September 30, 2015, and the years ended December 31, 2014 and 2013 and the five-month transition period ended December 31, 2012 and the fiscal year ended July 31, 2012, we experienced losses from operations. Our future revenues are dependent on the

Table of Contents

successful final development and commercialization of the ID/AST System, and there can be no assurance that we will be successful. If we are unsuccessful in generating revenues from such product, we will likely continue to experience losses from operations and negative cash flow as we have in the past.

We are a development-stage company that has incurred significant losses in recent years, and we expect to incur losses in the future. We cannot be certain that we will achieve or sustain profitability.

We have incurred significant costs in connection with the development and commercialization of our technology, and there is no assurance that we will achieve sufficient revenues to offset anticipated operating costs. We have incurred significant losses in recent years and expect to incur losses in the future. We expect that our losses will continue for at least the next several years as we will be required to invest significant additional funds toward development and commercialization of our technology. We also expect that our selling, general and administrative expenses will continue to increase due to the additional costs associated with establishing a dedicated sales force and other marketing efforts for the ID/AST System. Our ability to achieve or sustain profitability depends on numerous factors, many of which are beyond our control, including our ability to achieve marketing authorization from the FDA or regulatory clearance for the Accelerate ID/AST System, the market acceptance of our product, future product development and our market penetration and margins. If we are unsuccessful in completing the development of the ID/AST System and generating revenues from ID/AST System sales, we will likely continue to experience losses from operations and negative cash flow. Although we anticipate deriving revenues from the sale of our products, no assurance can be given that these products can be sold on a net profit basis. If we achieve profitability, we cannot give any assurance that we will be able to sustain or increase profitability on a quarterly or annual basis in the future.

We have no experience in marketing and selling the ID/AST System.

We have no experience marketing and selling the ID/AST System. In anticipation of the receipt of marketing authorization from the FDA for the ID/AST System, we have begun to build our own sales force to market the ID/AST System directly to our target customers, and we plan to continue to build this sales force. In select geographies outside of the United States and Europe, we may also use third-party distributors to market our product.

Our future sales will depend in large part on our ability to successfully establish an effective sales force. Because we have no experience in marketing and selling the ID/AST System, our ability to forecast demand, the infrastructure required to support such demand and the sales cycle of our potential customers is unproven.

Moreover, we may use third-party distribution partners for certain geographic areas outside of the United States and Europe, and there is no guarantee that we will be able to enter into such arrangements on favorable terms. Distributors may not commit the necessary resources to market and sell the ID/AST System effectively or may choose to favor marketing the products of our competitors. If distributors do not perform adequately, or if we are unable to enter into effective arrangements with distributors in particular geographic areas, we may not realize our full potential for sales and growth in these areas.

If treatment guidelines for bacterial infections change, or the standard of care evolves, we may need to redesign and seek new marketing authorization from the FDA for our product candidates.

If treatment guidelines for bacterial infections change, or the standard of care evolves, we may need to redesign and seek new marketing authorization from the FDA or other regulatory clearance for our product candidates. If treatment guidelines change so that different treatments become desirable, the ID/AST System may no longer provide the information sought by physicians, and we could be required to seek marketing authorization from the FDA or other regulatory clearance for a revised product.

Table of Contents

We may not be able to correctly estimate or control our future operating expenses, which could lead to cash shortfalls.

Our operating expenses may fluctuate significantly in the future as a result of a variety of factors, many of which may be outside of our control. These factors include, but are not limited to:

the time and resources required to finalize the development of, and conduct clinical studies and obtain marketing authorization from the FDA or other regulatory clearances for, the ID/AST System;

the expenses we incur for research and development required to maintain and improve our technology, including the final development of the ID/AST System;

the expenses we incur in connection with the development, marketing authorization and regulatory clearance of the use of the ID/AST System to test on additional specimen types;

the costs of preparing, filing, prosecuting, defending and enforcing patent claims and other patent related costs, including litigation costs and the results of such litigation;

the expenses we incur in connection with commercialization activities, including product marketing, sales and distribution expenses;

the costs incurred to build manufacturing capabilities;

our sales strategy;

the costs to attract and retain personnel with the skills required for effective operations; and

the costs associated with being a public company.

Our budgeted expense levels are based in part on our expectations concerning future revenues from sales of the ID/AST System, as well as our assessment of the future investments needed to expand our commercial organization and support research and development activities in connection with the ID/AST System. We may be unable to reduce our expenditures in a timely manner to compensate for any unexpected events or a shortfall in revenue. Accordingly, a shortfall in demand for our products or other unexpected events could have an immediate and material impact on our cash levels.

Breaches of our information technology systems could have a material adverse effect on our operations and potentially result in liability, depending on the type of breach and information compromised.

We rely on information technology systems to process, transmit and store electronic information, which may include protected health information, in our day-to-day operations. In addition, our research and development operations are highly dependent on our information technology and storage. Our information technology systems have been subjected to computer viruses or other malicious codes and phishing attacks, and we expect to be subject to similar viruses and codes in the future. These attacks could result in our intellectual property, unsecured protected health information, and other confidential information being lost or stolen, including the disclosure of our trade secrets, disruption of our operations, loss of valuable research and development data, the need to notify individuals whose information was disclosed, increased costs for security measures or remediation costs and diversion of management attention and other negative consequences. While we will continue to implement protective measures to reduce the risk of and detect future cyber incidents, cyber-attacks are becoming more sophisticated and frequent, and the techniques used in such attacks change rapidly. There can be no assurance that our protective measures will prevent future

attacks that could have a significant impact on our business.

S-12

Table of Contents

We are dependent on our key employees. If we are unable to recruit, train and retain qualified personnel, we may not achieve our goals.

Because of the complex and technical nature of our products and the dynamic market in which we compete, our future success depends on our ability to recruit, train and retain key personnel, including our senior management, research and development, science and engineering, manufacturing and sales and marketing personnel. In particular, we are highly dependent on the management and business expertise of Lawrence Mehren, our President and Chief Executive Officer. We do not maintain key person life insurance for Mr. Mehren or any of our employees. Our industry is very competitive for qualified personnel. To the extent that the services of Mr. Mehren would be unavailable to us, we may be unable to employ another qualified person with the appropriate background and expertise to replace Mr. Mehren on terms suitable to us. Our growth depends, in particular, on attracting, retaining and motivating highly trained sales personnel with the necessary scientific background and ability to understand our systems and pathogens at a technical level. In addition, we may need additional employees at our manufacturing facilities to meet demand for our products as we scale up our sales and marketing operations.

We face competition from industry participants who may have greater resources than we do.

The industry in which we compete is subject to rapid technological changes, and we face and expect to continue to face competition for our products. We may also face competition from non-medical device companies. Many of our competitors and potential competitors may have substantially greater research and development, financial, manufacturing, customer support, sales and marketing resources, larger customer bases, longer operating histories, greater name recognition and more established relationships in the industry than we do. In addition, some of our competitors may, individually or together with companies affiliated with them, have greater human and scientific resources than we do. Our competitors could develop technologies and methods that are more effective than our current and proposed technologies, including but not limited to the ID/AST System.

We cannot assure you that we will effectively compete or that we will be successful in the face of increasing competition from new products and technologies introduced by existing or new competitors. In addition, we cannot assure you that our future competitors do not have or will not develop products or technologies that enable them to produce competitive products with greater capabilities or at lower costs than our products. Any failure to compete effectively could materially and adversely affect our business, financial condition and operating results.

We expect to generate a portion of our future revenue internationally and are subject to various risks relating to our international activities which could adversely affect our operating results.

Assuming we receive the applicable regulatory approvals, we plan to market and sell the ID/AST System in Europe and other countries outside of the United States in the future. In order to market our products in the European Union and many other foreign jurisdictions, we, or our distributors or partners, must obtain separate regulatory approvals and comply with numerous and varying regulatory requirements regarding safety and efficacy and governing, among other things, clinical studies and commercial sales and distribution of our products. The approval procedure varies among countries and can involve additional testing. In addition, in many countries outside the United States, a product must be approved for reimbursement before the product can be approved for sale in that country. We may not obtain approvals from regulatory authorities outside the United States on a timely basis, if at all, which could harm our ability to expand into markets outside the United States. In addition, engaging in international business involves a number of other difficulties and risks, including:

required compliance with existing and changing foreign healthcare and other regulatory requirements and laws, such as those relating to patient privacy or handling of bio-hazardous waste;

required compliance with anti-bribery laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, data privacy requirements, labor laws and anti-competition regulations;

Table of Contents

export and import restrictions;

various reimbursement and insurance regimes;

laws and business practices favoring local companies;

longer payment cycles and difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;

political and economic instability;

potentially adverse tax consequences, tariffs, customs charges, bureaucratic requirements and other trade barriers;

foreign exchange controls;

fluctuations due to changes in foreign currency exchange rates;

difficulties and costs of staffing and managing foreign operations; and

difficulties protecting or procuring intellectual property rights.

Our employees, independent contractors, principal investigators, consultants, commercial partners, vendors and other agents may engage in misconduct or other improper activities, including non-compliance with legal standards and requirements.

We are exposed to the risk of fraud or other misconduct by our employees, independent contractors, principal investigators, consultants, commercial partners, vendors and other agents. Misconduct by these parties could include intentional, reckless or negligent failures to: (i) comply with the laws and regulations of the FDA, the Centers for Medicare and Medicaid Services (CMS), the Department of Health and Human Services (HHS) Office of Inspector General, Office for Civil Rights and other similar foreign regulatory bodies; (ii) provide true, complete and accurate information to the FDA and other similar regulatory bodies; (iii) comply with manufacturing requirements of the FDA and other similar regulatory bodies and manufacturing standards we have established; (iv) comply with healthcare fraud and abuse laws and regulations in the United States and similar foreign fraudulent misconduct laws; or (v) report financial information or data accurately, or disclose unauthorized activities to us. These laws may impact, among other things, our activities with principal investigators and research subjects, as well as our sales, marketing and education programs. In particular, the promotion, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing, unauthorized use of protected health information and data breaches, and other abusive practices. These laws may restrict or prohibit a wide range of activities related to pricing, discounting, marketing and promotion, patient support, royalty, consulting, research and other business arrangements, as well as the improper use of patient information obtained in the course of clinical studies. We currently have a code of conduct applicable to all of our employees, but it is not always possible to identify and deter employee misconduct, and our code of conduct and the other precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses, or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, monetary fines, disgorgement, individual imprisonment, corporate integrity agreements, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations. Any of

Table of Contents

these actions or investigations could result in substantial costs to us, including legal fees, and divert the attention of management from operating our business.

We may be unable to successfully manage our growth.

We expect to expand our operations following marketing authorization from the FDA and regulatory clearance and the commercial launch of the ID/AST System. We intend to develop a targeted sales force in connection with our commercialization efforts. Our growth has placed and will continue to place a significant strain on our management, operating and financial systems and our sales, marketing and administrative resources. As a result of our growth, operating costs may escalate faster than planned, and some of our internal systems and processes, including those relating to manufacturing our products, may need to be enhanced, updated or replaced. We also plan to introduce additional test kits for use on the Accelerate ID/AST System to enable its use with other sample types (*e.g.*, respiratory samples, skin, soft tissue and urine), and plan to invest in the development of additional instruments, tests and other microbiology solutions. If we cannot effectively manage our expanding operations, manufacturing capacity and costs, including scaling to meet increased demand, we may not be able to continue to grow or we may grow at a slower pace than expected.

We are now subject to and may in the future be subject to shareholder lawsuits, including purported class actions, which is expensive and could divert the attention of management away from our business. In addition, any adverse result of such litigation could negatively impact our financial condition or results of operations.

In the past, companies such as Accelerate that have experienced volatility in the market price of their stock have been subject to an increased incidence of securities class action litigation and other shareholder lawsuits. We are now and may in the future be the target of this type of litigation. Shareholder lawsuits against us, our officers or directors could result in substantial costs and divert the attention of management away from operating our business and other concerns, which could harm our business.

In March 2015, a putative securities class action lawsuit was filed in the United States District Court, District of Arizona, against us and certain of our officers and directors alleging that we made false or misleading statements or material omissions in our previous disclosures regarding the ID/AST System. Defendants moved to dismiss the amended complaint on July 21, 2015, which is pending before the Court. We believe the case is without merit and intend to defend it vigorously. However, an adverse result could have a material adverse effect upon our financial condition or results of operations. For more information regarding this proceeding, see Part II. Other Information, Item 1. Legal Proceedings, of our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2015, which is incorporated by reference herein.

Current macroeconomic conditions and the uncertain economic outlook may remain challenging for the foreseeable future.

Global economic conditions may remain challenging and uncertain for the foreseeable future. These conditions not only limit our access to capital but also make it difficult for our customers, our vendors and us to accurately forecast and plan future business activities, and they could cause U.S. and foreign hospitals and other customers to slow spending on our products, which would delay and lengthen sales cycles. Some of our customers rely on government research grants to fund technology purchases. If negative trends in the economy affect the government's allocation of funds to research, there may be less grant funding available for certain of our customers to purchase technologies from us. Certain of our customers may face challenges gaining timely access to sufficient credit or may otherwise be faced with budget constraints, which could result in decreased purchases of our products or in an impairment of their ability to make timely payments to us. If our customers do not make timely payments to us, we may be required to assume greater credit risk relating to those customers and increase our allowance for doubtful accounts, and our days sales outstanding would be negatively impacted. Although we maintain allowances for doubtful accounts for estimated losses resulting

Table of Contents

from the inability of our customers to make required payments, we may not continue to experience the same loss rates that we have in the past. Additionally, challenging macroeconomic conditions and market turbulence may also impact our suppliers, causing them to be unable to supply in a timely manner sufficient quantities of customized components, thereby impairing our ability to manufacture on schedule and at commercially reasonable costs.

Compliance with public company corporate governance and reporting is complex and expensive.

We are subject to laws and regulations affecting our domestic and international operations in a number of areas. Many laws and regulations, notably those adopted in connection with the Sarbanes-Oxley Act of 2002 by the Securities and Exchange Commission (the "SEC"), the Dodd-Frank Wall Street Reform and Consumer Protection Act and The NASDAQ Stock Market, impose obligations on public companies, such as ours, which have increased the scope, complexity and cost of corporate governance, reporting and disclosure practices. Compliance with these laws, regulations and similar requirements may be onerous, requires substantial management time and oversight and requires us to incur significant additional accounting, legal and compliance costs. Any such costs, which may rise in the future as a result of changes in these laws and regulations or in their interpretation could individually or in the aggregate make our products and services more expensive, delay the introduction of new products in one or more regions, or cause us to change or limit our business practices. In addition, our larger competitors may be in a better position to absorb the costs of being a public company. We have implemented policies and procedures designed to ensure compliance with applicable laws and regulations, but there can be no assurance that our employees, contractors or agents will not violate such laws and regulations or our policies and procedures.

Additionally, changes to existing accounting rules and standards and the implementation of new accounting rules or standards, such as tax accounting or revenue recognition rules, may adversely impact our reported financial results and business, and may further require us to incur greater accounting fees.

Our estimates of market opportunity and forecasts of market growth may prove to be inaccurate, and even if the market in which we compete achieves the forecasted growth, our business could fail to grow at similar rates, if at all.

Market opportunity estimates and growth forecasts are subject to significant uncertainty and are based on assumptions and estimates that may not prove to be accurate. The estimates and forecasts in this prospectus supplement relating to the size and expected growth of our market, total available market, estimated test and placement volume and estimated pricing, may prove to be inaccurate, which may have negative consequences, such as us overestimating our potential market opportunity. Even if the market in which we compete meets our size estimates and forecasted growth, our business could fail to grow at similar rates, if at all.

Our reputation, ability to do business and financial results may be impaired by improper conduct by any of our employees, agents or any business partners.

We cannot provide assurance that our internal controls and compliance systems will always protect us from acts committed by employees, agents or business partners that would violate U.S. and/or non-U.S. laws, including the laws governing payments to government officials, bribery, fraud, kickbacks and false claims, pricing, sales and marketing practices, conflicts of interest, competition, export and import compliance, money laundering and data privacy. In particular, the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act and similar anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business. Any such improper actions or allegations of such acts could damage our reputation and subject us to civil or criminal investigations in the U.S. and in other jurisdictions and related shareholder lawsuits, could lead to substantial civil and criminal, monetary and non-monetary penalties and could cause us to incur significant legal and investigatory fees.

Table of Contents

Risks related to our intellectual property

If we are unable to effectively protect our non-patented intellectual property, our business would be harmed.

In addition to patent protection, we rely on trademark, copyright, trade secret protection and confidentiality agreements to protect the intellectual property rights related to our proprietary technologies, both in the United States and in other countries. If we fail to protect our intellectual property, third parties may be able to compete more effectively against us and we may incur substantial litigation costs in our attempts to recover or restrict use of our intellectual property. We own or exclusively license 12 issued U.S. patents and 14 pending U.S. patent applications, including provisional and non-provisional filings. We also own or exclusively license 13 pending or granted counterpart applications worldwide. In addition to our patents, we possess an array of unpatented proprietary technology and know-how, and we license intellectual property rights to and from third parties. The strength of patents in our field involves complex legal and scientific questions. Uncertainty created by these questions means that our patents may provide only limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. In addition, competitors could purchase our products and attempt to replicate some or all of the competitive advantages we derive from our development efforts, willfully infringe our intellectual property rights, design around our protected technology or develop their own competitive technologies that fall outside of the protections provided by our intellectual property rights. If our intellectual property, including licensed intellectual property, does not adequately protect our market position against competitors' products and methods, our competitive position could be adversely affected, as could our business.

Further, if we are unable to prevent unauthorized disclosure of our non-patented intellectual property, and there is no guarantee that we will have any such enforceable trade secret protection, we may not be able to establish or maintain a competitive advantage. In addition, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad.

We may not be successful in our currently pending or future patent applications, and even if such applications are successful, we cannot guarantee that the resulting patents will sufficiently protect our products and proprietary technology.

We cannot assure you that any of our currently pending or future patent applications will result in issued patents with claims that cover our products and technologies in the United States or in other foreign countries, and we cannot predict how long it will take for such patents to be issued. Further, issuance of a patent is not conclusive as to its inventorship or scope, and there is no guarantee that our issued patents will include claims that are sufficiently broad to cover our technologies or to provide meaningful protection from our competitors. Further, we cannot be certain that all relevant prior art relating to our patents and patent applications has been found. Accordingly, there may be prior art that can invalidate our issued patents or prevent a patent from issuing from a pending patent application, at all or with claims that have a scope broad enough to provide meaningful protection from our competitors.

Even if patents do successfully issue and even if such patents cover our products and technologies, we cannot assure you that other parties will not challenge the validity, enforceability or scope of such issued patents in the United States and in foreign countries, including by proceedings such as reexamination, *inter-partes* review, interference, opposition, or other patent office or court proceedings. The strength of patents in our field involves complex legal and scientific questions. Moreover, we cannot assure you that if such patents were challenged in court or before a regulatory agency that the patent claims will be held valid, enforceable, to be sufficiently broad to cover our technologies or to provide meaningful protection from our competitors. Nor can

Table of Contents

we assure you that the court or agency will uphold our ownership rights in such patents. Accordingly, we cannot guarantee that we will be successful in defending challenges made against our patents and patent applications. Any successful third-party challenge to our patents could result in the unenforceability or invalidity of such patents, or narrowing of claim scope, such that we could be deprived of patent protection necessary for the successful commercialization of our products and technologies, which could adversely affect our business.

Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property, provide exclusivity for our products and technologies or prevent others from designing around our claims. Others may independently develop similar or alternative products and technologies or duplicate any of our products and technologies. These products and technologies may not be covered by claims of issued patents we hold. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

Further, if we encounter delays in regulatory approvals, the period of time during which we could market a product under patent protection could be reduced. Since patent applications in the United States and most other countries are confidential for a period of time after filing, and some remain so until issued, we cannot be certain that we were the first to make the inventions covered by our pending patent applications, or that we were the first to file any patent application related to a product candidate. Furthermore, if third parties have filed such patent applications, an interference proceeding in the United States can be initiated by a third party to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. In addition, patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after it is filed. Various extensions may be available; however the life of a patent, and the protection it affords, is limited.

We may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive and time consuming.

Third parties may infringe or misappropriate our intellectual property, including our existing patents and patents that we may issue to us in the future. As a result, we may be required to file infringement claims to stop third-party infringement or unauthorized use. Further, we may not be able to prevent misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

If we file an infringement action against a third party, that party may challenge the scope, validity or enforceability of our patents, requiring us to engage in complex, lengthy and costly litigation or other proceedings. Such litigation and administrative proceedings could result in revocation of our patents or amendment of our patents such that they do not cover our product candidates. They may also put our pending patent applications at risk of not issuing or issuing with limited and potentially inadequate scope to cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable.

Enforcing our intellectual property rights through litigation is very expensive and time-consuming. Some of our competitors may be able to sustain the costs of litigation more effectively than we can because of greater financial resources. Patent litigation and other proceedings may also absorb significant management time. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or administrative proceedings, there is a risk that some of our confidential information could be compromised by disclosure. The occurrence of any of the foregoing could have a material adverse effect on our business, financial condition or results of operations.

We could face claims that our proprietary technologies infringe on the intellectual property rights of others.

Due to the significant number of U.S. and foreign patents issued to, and other intellectual property rights owned by, entities operating in the industry in which we operate, we believe that there is a risk of litigation

Table of Contents

arising from infringement of these patents and other rights. Third parties may assert infringement or other intellectual property claims against us or our licensees.

In addition, patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after the earliest filing date for which a benefit is claimed. For this reason, and because publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our issued patents or our pending applications or that we were the first to invent the technology. Another party may have filed or may in the future file patent applications covering our products or technology similar to ours. Under the first to invent rules applicable to patents filed before March 2013, any such patent application may have priority over our patent applications or patents, which could further require us to obtain rights to issued patents covering such technologies. If another party has filed a U.S. patent application on inventions similar to ours, we may have to participate in an interference proceeding declared by the U.S. Patent and Trademark Office to determine priority of invention in the United States. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful if the other party had independently arrived at the same or similar invention prior to our own invention, resulting in a loss of our U.S. patent position with respect to such inventions.

We may have to pay substantial damages, including treble damages, for past infringement if it is ultimately determined that our products infringe on a third party's proprietary rights. In addition, even if such claims are without merit, defending a lawsuit may result in substantial expense to us and divert the efforts of our technical and management personnel. We may also be subject to significant damages or injunctions against development and sale of some of our products. Furthermore, claims of intellectual property infringement may require us to enter into royalty or license agreements with third parties, and we may be unable to obtain royalty or license agreements on commercially acceptable terms, if at all.

We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that these employees or we have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. Litigation may be necessary to defend against these claims.

In addition, while it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management.

Table of Contents

Risks related to our research and development activities

We have a single research and development facility and we may be unable to continue to conduct our research and development activities if we lose this facility. If our facility or our equipment were damaged or destroyed, or if we experience a significant disruption in our operations for any reason, our ability to continue to operate our business could be materially harmed.

We currently conduct all of our research and development and product development activities in our existing facility in Tucson, Arizona. If this facility were to be damaged, destroyed or otherwise unable to operate, whether due to fire, floods, storms, tornadoes, other natural disasters, employee malfeasance, terrorist acts, power outages or otherwise, or if our business is disrupted for any other reason, we may not be able to finalize the development of the ID/AST System or any future products or test our products as promptly as our potential customers expect, or possibly not at all, and we would have no other means of conducting such activities until we were able to restore such capabilities at the current facility or develop an alternative facility. Further, in such an event, we may lose revenue and significant time during which we might otherwise have conducted research and development and product development activities. Further, we may not be able to maintain our relationships with our licensees or customers.

The manufacture of components of the ID/AST System involves complex processes, sophisticated equipment and strict adherence to specifications and quality systems procedures. Any unforeseen manufacturing problems, such as contamination of our facility, equipment malfunction or failure to strictly follow procedures or meet specifications, could result in delays or shortfalls in production of our products. Identifying and resolving the cause of any manufacturing issues could require substantial time and resources. If we are unable to keep up with future demand for our products by successfully manufacturing and shipping our products in a timely manner, our revenue growth could be impaired and market acceptance of our product candidates could be adversely affected.

While we carry a nominal amount of business interruption insurance to cover lost revenue and profits, this insurance does not cover all possible situations. If we have underestimated our insurance needs with respect to an interruption, or if an interruption is not subject to coverage under our insurance policies, we may not be able to cover our losses. In addition, our business interruption insurance would not compensate us for the loss of opportunity and potential adverse impact on relations with our licensees or customers.

We use hazardous materials in some of our research, development and manufacturing processes and face the accompanying risks and regulations governing environmental safety.

Our operations are subject to complex and stringent environmental, health, safety and other governmental laws and regulations that both public officials and private individuals may seek to enforce. In particular, our research activities sometimes involve the controlled use of various hazardous materials. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by state and federal regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated, and we may not be in compliance with these regulations. In addition, existing laws and regulations may also be revised or reinterpreted, or new laws and regulations may become applicable to us, whether retroactively or prospectively, causing us to incur additional compliance costs and/or change the manner in which we operate. We could be held liable for any damages that might result from any accident or release involving hazardous materials.

Disruptions in the supply of raw materials, consumable goods or other key product components, or issues associated with their quality from our single source suppliers, could result in a significant disruption in sales and profitability.

We must manufacture or engage third parties to manufacture components of our products in sufficient quantities and on a timely basis, while maintaining product quality, acceptable manufacturing costs and

Table of Contents

complying with regulatory requirements. Our components are custom-made by only a few outside suppliers. In certain instances, we have a sole source supply for key product components of the ID/AST System. We may be unable to satisfy our forecasted demand from existing suppliers for our products, or we may be unable to find alternative suppliers for key product components or ancillary items at reasonably comparable prices. If this occurs, we may be unable to manufacture our products and/or meet our customers' needs in a timely manner or at all.

Additionally, we have entered into supply agreements with most of our suppliers to help ensure component availability and flexible purchasing terms with respect to the purchase of such components. If our suppliers discontinue production of a key component for one or more of our products, we may be unable to identify or secure a viable alternative on reasonable terms, or at all, which could limit our ability to manufacture our products. While we may be able to modify our product candidates to utilize a new source of components, we may need to secure marketing authorization from the FDA or other regulatory clearance for the modified product, and it could take considerable time and expense to perform the requisite tasks prior to seeking such authorization.

In determining the required quantities of our products and our manufacturing schedule, we will need to make significant judgments and estimates regarding factors such as market trends and any seasonality with respect to our sales. Because of the inherent nature of estimates and our lack of experience marketing the ID/AST System, there could be significant differences between our estimates and the actual amounts of products we require. This can result in shortages if we fail to anticipate demand, or excess inventory and write-offs if we order more than we need.

Reliance on third-party manufacturers entails risk to which we would not be subject if we manufactured these components ourselves, including:

reliance on third parties for regulatory compliance and quality assurance;

possible breaches of manufacturing agreements by the third parties because of factors beyond our control;

possible regulatory violations or manufacturing problems experienced by our suppliers;

possible termination or non-renewal of agreements by third parties, based on their own business priorities, at times that are costly or inconvenient for us;

the potential obsolescence and/or inability of our suppliers to obtain required components;

the potential delays and expenses of seeking alternate sources of supply or manufacturing services;

the inability to qualify alternate sources without impacting performance claims of our products;

reduced control over pricing, quality and timely delivery due to the difficulties in switching to alternate suppliers or assemblers; and

increases in prices of raw materials and key components.

The manufacturing operations for the ID/AST System use highly technical processes involving unique, proprietary techniques. In addition, the manufacturing equipment we use would be costly to repair or replace and could require substantial lead time to repair or replace. Any interruption in our operations or decrease in the production capacity of our manufacturing facility or the facilities of any of our suppliers because of equipment failure, natural disasters such as earthquakes, tornadoes and fires, or otherwise, would limit our ability to meet customer demand for our products. In the event of a disruption, we may lose customers and we

Table of Contents

may be unable to regain those customers thereafter. Our insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, or at all.

We have made and intend to make significant additional investments in research and development, but there is no guarantee that any of these investments will ultimately result in a commercial product that will generate revenues.

The ID/AST System integrates several of our component products, systems and processes. We have dedicated significant resources on research and development activities, and we intend to spend significantly more on research and development activities. Notwithstanding these investments, we anticipate that we will have to spend additional funds in the research and development of the ID/AST System, particularly with respect to its use for additional specimen types. There can be no assurance that we will be able to obtain marketing authorization from the FDA of the ID/AST System or that we will be able to expand its use for additional specimen types. There can also be no assurance that we will be able to develop additional types of tests and instruments in the future.

Risks related to government regulation

We and our suppliers, contract manufacturers and customers are subject to various governmental laws and regulations, and we may incur significant expenses to comply with, and experience delays in our product commercialization as a result of, these laws and regulations.

Our operations are affected by various state, federal, and international healthcare, environmental, anti-corruption, fraud and abuse (including anti-kickback and false claims laws), privacy, and employment laws. Violations of these laws can result in criminal or civil sanctions, including substantial fines and, in some cases, exclusion from participation in federal health care programs such as Medicare and Medicaid and individual liability and imprisonment.

We are also subject to extensive regulation by the FDA pursuant to the Federal Food, Drug, and Cosmetic Act, by comparable agencies in foreign countries and by other regulatory agencies and governing bodies. Following the introduction of a product, these and other government agencies will periodically review our manufacturing processes, product performance and compliance with applicable requirements.

We are also subject to various U.S. healthcare related laws regulating sales, contracting, marketing, and other business arrangements and the use and disclosure of individually identifiable health information. These include but are not limited to:

The federal Anti-Kickback Statute, which prohibits persons from knowingly and willfully offering, providing, soliciting, or receiving any remuneration, directly or indirectly, in exchange for or to induce the referral of an individual, or the purchasing, leasing, ordering, recommending, furnishing or arranging for a good or service, for which payment may be made under a federal health care program, such as Medicare or Medicaid.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA), which prohibits knowingly and willfully (i) executing a scheme to defraud any health care benefit program, including private payors, or (ii) falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for items or services under a health care benefit program.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, which also restricts the use and disclosure of protected health information, mandates the adoption of standards relating to the privacy and security of protected health information, and requires us to report

Table of Contents

certain security breaches to health care provider customers with respect to such information where we are acting as a HIPAA business associate to that customer.

The federal Physician Payment Sunshine Act, which requires manufacturers of certain medical devices to track payments or other transfers of value given to U.S. licensed physicians or teaching hospitals and to report this data to CMS annually for subsequent public disclosure.

The federal False Claims Act, which imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment by a federal health care program. The qui tam provisions of the False Claims Act allow a private individual to bring actions on behalf of the federal government alleging that the defendant has submitted a false claim to the federal government and to share in any monetary recovery.

Similar requirements have been adopted by many states and foreign countries. Violations of any of these laws can lead to additional legal risk such as risk of plaintiff class actions, state Attorney General actions, and investigations by the Federal Trade Commission, among others.

Failure to comply with applicable requirements, or later discovery of previously unknown problems with our products or manufacturing processes, including our failure or the failure of one of our contract manufacturers to take satisfactory corrective action in response to an adverse inspection, can result in, among other things:

administrative or judicially imposed sanctions;

injunctions or the imposition of civil penalties;

recall or seizure of our products;

total or partial suspension of production or distribution;

withdrawal or suspension of marketing clearances or approvals;

clinical holds;

warning letters;

refusal to permit the import or export of our products;

criminal prosecution; and

exclusion or debarment from participation in federal health care programs such as Medicare and Medicaid. Any of these actions, in combination or alone, could prevent us from marketing, distributing and selling our products.

Edgar Filing: Accelerate Diagnostics, Inc - Form 424B5

In addition, we have developed, configured and we intend to market our products to meet customer needs created by these various regulations. Any significant change in these regulations could reduce demand for our products. Governmental agencies may also impose new requirements regarding registration, labeling or prohibited materials that may require us to modify or re-register products already on the market or otherwise adversely impact our ability to market our products.

In addition, a product defect or regulatory violation could lead to a government-mandated or voluntary recall by us. We believe that the FDA would request that we initiate a voluntary recall if a product was defective or presented a risk of injury or gross deception. Regulatory agencies in other countries have similar authority to recall devices because of material deficiencies or defects in design or manufacture that could endanger health. Any recall would divert management attention and financial resources, could cause the price of our shares of

S-23

Table of Contents

common stock to decline, expose us to product liability or other claims (including contractual claims from parties to whom we sold products) and harm our reputation with customers.

The use of our diagnostic products by our customers is also affected by the Clinical Laboratory Improvement Amendments (CLIA) and related federal and state regulations that provide for regulation of laboratory testing. CLIA is intended to ensure the quality and reliability of clinical laboratories in the United States by mandating specific standards in the areas of personnel qualifications, administration, participation in proficiency testing, patient test management, quality assurance, quality control and inspections. Current or future CLIA requirements or the promulgation of additional regulations affecting laboratory testing may prevent some laboratories, hospitals, providers or other customers with laboratories from using some or all of our diagnostic products.

Maintaining adequate sales of our product may depend on the availability of adequate reimbursement to our customers from third-party payors, including government programs such as Medicare and Medicaid, private insurance plans, and managed care programs.

Maintaining and growing sales of our product, if approved, may depend in part on the availability of adequate reimbursement to our customers from third-party payors, including government programs such as Medicare and Medicaid, private insurance plans and managed care programs. Hospitals, clinical laboratories and other healthcare provider customers that may purchase our products generally bill various third-party payors to cover all or a portion of the costs and fees associated with diagnostic tests, including the cost of the purchase of our products. We currently expect that all of our diagnostic tests will be performed in a hospital inpatient setting, where governmental payors, such as Medicare, generally reimburse hospitals a single bundled payment that is based on the patient's diagnosis under a classification system known as the Medicare severity diagnosis-related groups (MS-DRGs) classification for all items and services provided to the patient during a single hospitalization, regardless of whether our diagnostic tests are performed during such hospitalization. As a result, our customers' access to adequate payment by government and private insurance plans is central to the acceptance of our products. We may be unable to sell our products, if approved, on a profitable basis if third-party payors reduce their current levels of payment or if our costs of production increase faster than increases in reimbursement levels.

Additionally, third-party payors are increasingly reducing reimbursement for medical products and services. In addition, the U.S. government, state legislatures, and foreign governments have and may continue to implement cost-containment measures and more restrictive policies, including price controls and restrictions on reimbursement. For example, the Budget Control Act of 2011 (the Budget Control Act) established a process to reduce federal budget deficits through an automatic sequestration process if deficit reductions targets are not otherwise reached. Under the terms of the Budget Control Act, sequestration imposes cuts to a wide range of federal programs, including Medicare, which is subject to a two percent cut. The Bipartisan Budget Act of 2013 extended the two percent sequestration cut for Medicare through fiscal year 2023, and a bill signed by the President on February 15, 2014 further extended this cut for an additional year, through fiscal year 2024. For fiscal year 2024, however, Medicare sequestration amounts will be realigned such that there will be a four percent sequester for the first six months and no sequester for the second six months, under the Protecting Access to Medicare Act of 2014.

While we cannot predict whether third-party reimbursement to our customers will be adequate, cost-containment measures and similar efforts by third-party payors, including government programs such as Medicare and Medicaid, could substantially impact the sales of our products and potentially limit our net revenue and results.

Table of Contents

We may be adversely affected by healthcare policy changes, including additional healthcare reform and changes in managed healthcare.

Healthcare reform and the growth of managed care organizations have been considerable forces in the medical diagnostics industry and in recent political discussions. These forces have placed, and are expected to continue to place, constraints on the levels of overall pricing for healthcare products and services as well as the coverage available by public and private insurance and thus, could have a material adverse effect on the future profit margins of our products or the amounts that we are able to receive from third parties for the licensing of our products. Changes in the United States healthcare market could also force us to alter our approach to selling, marketing, distributing and servicing our products and customer base. In and outside the United States, changes to government reimbursement policies could reduce the funding that healthcare service providers have available for diagnostic product expenditures, which could have a material adverse impact on the use of the products we are developing and our future sales, license and royalty fees and profit margin.

For example, the Affordable Care Act (the ACA), enacted in March 2010, made changes that have significantly impacted the medical device industry and other healthcare providers. The legislation requires, among other mandates, that certain medical device manufacturers pay an excise tax in an amount equal to 2.3% of the price for which such manufacturer sells its medical devices. We will be subject to this tax once we begin selling the ID/AST System. The ACA also requires CMS to reduce payments to hospitals reimbursed under Medicare's Inpatient Prospective Payment System (IPPS) that have excess readmissions. These and other applicable requirements set forth under the ACA and its current and future implementing regulations may significantly increase our costs, and/or reduce our customer's ability to obtain adequate reimbursement for tests performed with our products, which could adversely affect our business and financial condition.

In recent years, other legislative, regulatory, and political changes aimed at regulating healthcare delivery in general and clinical laboratory tests in particular have been proposed and adopted in the United States. Reimbursement for the laboratory industry is under significant pressure. In January 2015, HHS announced a plan to shift the Medicare program and the healthcare system at large, toward paying providers based on quality, rather than the quantity of care provided to patients. On July 31, 2015, CMS issued a final rule addressing the IPPS for fiscal year 2016, which included penalties for readmissions and for hospitals in the worst performing quartile of the Hospital Acquired Condition Reduction Program. With respect to clinical laboratory tests, on April 1, 2014, President Obama signed into law the Protecting Access to Medicare Act of 2014 (PAMA), revamping Medicare's clinical laboratory reimbursement system to tie Medicare payment rates to private market rates beginning in 2017. CMS then released a proposed rule on September 25, 2015 to implement such provisions of PAMA, requiring applicable clinical laboratories to report private payor reimbursement rates and volume data for tests on the clinical laboratory fee schedule. These measures can result in reduced prices, added costs, and decreased test utilization for our customers, although the full impact on our business of the ACA, changes to the IPPS, PAMA, and other applicable laws, regulations, and policies is uncertain.

We cannot predict whether future healthcare initiatives will be implemented at the federal or state level or in countries outside of the United States in which we may do business, or the effect of any future legislation or regulation will have on our industry generally, our ability to successfully commercialize the ID/AST System, and our overall business operations. Changes in healthcare policy could substantially impact the sales of our tests, increase costs and divert management's attention from our business. For example, expansion in the government's regulation of the United States healthcare system may result in decreased profits to us, lower reimbursements to our customers for laboratory testing or reduced medical procedure volumes.

Table of Contents

The regulatory processes applicable to our products and operations are expensive, time-consuming, and uncertain and may prevent us from obtaining required approvals for the commercialization of our products.

Our products, including the ID/AST System, are regulated as medical device products by the FDA and comparable agencies of other countries. In particular, FDA regulations govern activities such as product development, product testing, product labeling, product storage, premarket clearance or approval, manufacturing, advertising, promotion, product sales, reporting of certain product failures and distribution. Some of our products, depending on their intended use, will require approval of a premarket approval application (PMA) or clearance of a 510(k) notification from the FDA prior to marketing. The FDA has committed to review most 510(k) decisions within 90 days, but the review may be delayed due to requests for additional information. A decision may take significantly longer, and clearance is never assured. The PMA process is much more costly, lengthy and uncertain. The FDA has committed to review most PMAs within 180 days where an advisory panel is not required and within 320 days where an advisory panel is required, but the review may be delayed due to requests for additional information. A decision may take significantly longer, and approval is never assured. In the 510(k) clearance process, the FDA must determine that a proposed device is substantially equivalent to a device legally on the market, known as a predicate device, with respect to intended use, technology and safety and effectiveness, in order to clear the proposed device for marketing. Clinical data is sometimes required to support substantial equivalence. The PMA pathway requires an applicant to demonstrate the safety and effectiveness of the device based, in part, on extensive data, including technical, preclinical, clinical trial, manufacturing and labeling data. The PMA process is typically required for devices that are deemed to pose the greatest risk, such as life-sustaining, life-supporting or implantable devices. However, some devices are automatically subject to the PMA pathway regardless of the level of risk they pose, because they have not previously been classified into a lower risk class by the FDA. Manufacturers of these devices may request that the FDA review such devices in accordance with the *de novo* classification procedure, which allows a manufacturer whose novel device would otherwise require the submission and approval of a PMA prior to marketing to request down-classification of the device on the basis that the device presents low or moderate risk. If the FDA agrees with the down-classification, the applicant will then receive authorization to market the device. This device type can then be used as a predicate device for future 510(k) submissions.

The FDA can delay, limit or deny clearance or approval of a device for many reasons, including:

we may not be able to demonstrate to the FDA's satisfaction that our product candidates are safe and effective, sensitive and specific diagnostic tests, for their intended users;

the data from our pre-clinical studies and clinical trials may be insufficient to support clearance or approval, where required; and

the manufacturing process or facilities we or our contract manufacturers use may not meet applicable requirements.

We intend to utilize the *de novo* classification procedures to seek marketing authorization for the ID/AST System. If the FDA requires us to go through a lengthier, more rigorous examination for our product candidates than we had expected, our product introductions or modifications could be delayed or canceled, which could cause our launch to be delayed or, in the future, our sales to decline. In addition, the FDA may determine that our product candidates require the more costly, lengthy and uncertain PMA process. For example, if the FDA disagrees with our determination that the *de novo* classification procedures are the appropriate path to obtain marketing authorizations for the ID/AST System product candidates, the FDA may require us to submit a PMA, which is generally more costly and uncertain. The FDA has committed to review most PMAs within 180 days where an advisory panel is not required and within 320 days where an advisory panel is required, but the review may be delayed due to requests for additional information. A decision may take significantly longer, and approval is never assured.

Table of Contents

Further, even with respect to those future products where a PMA is not required, we cannot assure you that we will be able to obtain 510(k) clearances with respect to those products. The process of obtaining regulatory clearances or approvals, or completing the *de novo* classification process, to market a medical device can be costly and time consuming, and we may not be able to successfully obtain pre-market reviews on a timely basis, if at all. Further, even if we were to obtain regulatory clearance, it may not be for the uses we believe are important or commercially attractive, in which case we would not be permitted to market our product for those uses.

Clinical trial data is typically required to support a PMA and is sometimes required for a 510(k) pre-market notification. Although many 510(k) pre-market notifications are cleared without clinical data, in some cases, the FDA requires significant clinical data to support substantial equivalence. We are planning clinical trials for the ID/AST System. Clinical trials are expensive and time-consuming. In addition, the commencement or completion of any clinical trials may be delayed or halted for any number of reasons, including product performance, changes in intended use, changes in medical practice and the opinion of evaluator Institutional Review Boards.

Additionally, since 2009, the FDA has significantly increased the scrutiny applied to its oversight of companies subject to its regulations by hiring new investigators and increasing inspections of manufacturing facilities. The FDA has also undertaken initiatives related to enhancement of the 510(k) review process and has proposed significant changes to the regulation of laboratory developed tests. We continue to monitor these developments and analyze how they will impact the marketing authorization of our products. These and other actions proposed by the FDA's Center for Devices and Radiological Health could result in significant changes to the 510(k) process, which could complicate the product approval process, although we cannot predict the effect of such changes and cannot ascertain if such changes will have a substantive impact on the approval of our products. If we fail to adequately respond to the increased scrutiny and streamlined 510(k) submission process, our business may be adversely impacted.

Failure to comply with the applicable requirements can result in, among other things, warning letters, administrative or judicially imposed sanctions such as injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, refusal to grant premarket clearance or PMA for devices, withdrawal of marketing clearances or approvals, or criminal prosecution. With regard to products for which we seek 510(k) clearance or PMA approval from the FDA, any failure or material delay to obtain such clearance or approval could harm our business. If the FDA were to disagree with our regulatory assessment and conclude that approval or clearance is necessary to market the products, we could be forced to cease marketing the products and seek approval or clearance. Once clearance or approval has been obtained for a product, there is an obligation to ensure that all applicable FDA and other regulatory requirements continue to be met.

In addition, it is possible that the current regulatory framework could change or additional regulations could arise at any stage during our product development or marketing, which may adversely affect our ability to obtain or maintain approval of our products. For example, in response to industry and healthcare provider concerns regarding the predictability, consistency and rigor of the 510(k) regulatory pathway, the FDA initiated an evaluation of the program, and in January 2011, announced several proposed actions intended to reform the review process governing the clearance of medical devices. The FDA intends for these reform actions to improve the efficiency and transparency of the clearance process, as well as bolster patient safety. In addition, as part of the Food and Drug Administration Safety and Innovation Act, Congress reauthorized the Medical Device User Fee Amendments with various FDA performance goal commitments and enacted several Medical Device Regulatory Improvements and miscellaneous reforms that are further intended to clarify and improve medical device regulation both pre- and post-approval. Any delay in, or failure to receive or maintain, clearance or approval for our product candidates could prevent us from generating revenue from these product candidates. Additionally, the FDA and other regulatory authorities have broad enforcement powers. Regulatory enforcement or inquiries, or other increased scrutiny on us, could affect the perceived safety and efficacy of our product candidates and dissuade our customers from using our product candidates, if and when they are authorized for marketing.

Table of Contents

Our manufacturing facility located in Tucson, Arizona, where we assemble and produce the ID/AST System, is subject to periodic regulatory inspections by the FDA and other federal and state and foreign regulatory agencies. For example, this facility is subject to Quality System Regulations (QSR) of the FDA and is subject to annual inspection and licensing by the State of Arizona. If we fail to maintain this facility in accordance with the QSR requirements, international quality standards or other regulatory requirements, our manufacturing process could be suspended or terminated, which would prevent us from being able to provide products to our customers in a timely fashion.

Sales of our diagnostic product candidates outside the United States are subject to foreign regulatory requirements governing clinical studies, vigilance reporting, marketing approval, manufacturing, product licensing, pricing and reimbursement. These regulatory requirements vary greatly from country to country. As a result, the time required to obtain approvals outside the United States may differ from that required to obtain marketing authorization from the FDA, and we may not be able to obtain foreign regulatory approvals on a timely basis or at all. Marketing authorization from the FDA does not ensure approval by regulatory authorities in other countries, and approval by one foreign regulatory authority does not ensure clearance or approval by regulatory authorities in other countries or by the FDA. Foreign regulatory authorities could require additional testing. Failure to comply with these regulatory requirements, or to obtain required clearances or approvals, could impair our ability to commercialize our diagnostic product candidates outside of the United States.

Modifications to our products, if cleared or approved, may require new 510(k) clearances or pre-market approvals, or may require us to cease marketing or recall the modified products until clearances are obtained.

Any modification to a device authorized for marketing that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, design or manufacture, requires a new 510(k) clearance or, possibly, approval of a PMA supplement or new PMA. The FDA requires every manufacturer to make this determination in the first instance, but the FDA may review any manufacturer's decision. The FDA may not agree with our decisions regarding whether new clearances or approvals are necessary. If the FDA disagrees with our determination and requires us to submit new 510(k) notifications, PMA supplements or PMAs for modifications to previously cleared or approved products for which we conclude that new clearances or approvals are unnecessary, we may be required to cease marketing or to recall the modified product until we obtain clearance or approval, and we may be subject to significant regulatory fines or penalties.

Furthermore, the FDA's ongoing review of the 510(k) program may make it more difficult for us to make modifications to any products for which we obtain clearance, either by imposing more strict requirements on when a manufacturer must submit a new 510(k) for a modification to a previously cleared product, or by applying more onerous review criteria to such submissions. The practical impact of the FDA's continuing scrutiny of the 510(k) program remains unclear.

We rely on third parties to conduct studies of our products that may be required by the FDA or other regulatory authorities, and those third parties may not perform satisfactorily.

We rely on third parties, including medical investigators, to conduct studies on our products. Our reliance on these third parties for clinical development activities will reduce our control over these activities. These third parties may not complete activities on schedule or conduct studies in accordance with regulatory requirements or our study design. If applicable, our reliance on third parties that we do not control will not relieve us of any applicable requirement to prepare, and ensure compliance with, various procedures required under good clinical practices. If these third parties do not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines, if the third parties need to be replaced or if the quality or accuracy of the data they obtain is compromised due to their failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our studies may be extended, delayed, suspended or terminated, and we may not be able to obtain marketing authorization from the FDA or regulatory clearance for our products.

Table of Contents

If we obtain marketing authorization from the FDA, a recall of our products, either voluntarily or at the direction of the FDA, or the discovery of serious safety issues with our products that leads to corrective actions, could have a significant adverse impact on us.

The FDA and similar foreign governmental authorities have the authority to require the recall of commercialized products. Manufacturers may, under their own initiative, recall a product if any material deficiency in a device is found. A government-mandated or voluntary recall by us or one of our distributors could occur as a result of an unacceptable risk to health, component failures, manufacturing errors, design or labeling defects or other deficiencies and issues. Under the FDA's medical device reporting regulations, we are required to report to the FDA any incident in which our product may have caused or contributed to a death or serious injury or in which our product malfunctioned and, if the malfunction were to recur, would likely cause or contribute to death or serious injury. Repeated product malfunctions may result in a voluntary or involuntary product recall. Recalls of any of our products would divert managerial and financial resources, have an adverse effect on our reputation, and may impair our ability to produce our products in a cost-effective and timely manner in order to meet our customers' demands. Depending on the corrective action we take to redress a product's deficiencies or defects, the FDA may require, or we may decide that we will need to obtain, new approvals or clearances for the device before we may market or distribute the corrected device. Seeking such approvals or clearances may delay our ability to replace the recalled devices in a timely manner. Moreover, if we do not adequately address problems associated with our devices, we may face additional regulatory enforcement action, including FDA warning letters, product seizure, injunctions, administrative penalties, or civil or criminal fines. We may also be required to bear other costs or take other actions that may have a negative impact on our sales as well as face significant adverse publicity or regulatory consequences, which could harm our ability to market our products in the future.

Any adverse event involving our products could result in future voluntary corrective actions, such as recalls or customer notifications, or agency action, such as inspection, mandatory recall or other enforcement action. Any corrective action, whether voluntary or involuntary, as well as defending ourselves in a lawsuit, would require the dedication of our time and capital, distract management from operating our business and may harm our reputation.

Risks related to our common stock and this offering

Our stock price has been volatile and may continue to be volatile and traded on low volumes.

The trading price of our common stock has been, and is likely to continue to be, highly volatile. One factor contributing to volatility in the price of our common stock is the low trading volume currently prevailing in the market for our shares. The market value of your investment in our common stock may rise or fall sharply at any time because of this volatility and also because of significant short positions that may be taken by investors from time to time in our common stock. During the year ended December 31, 2014, the closing sale price for our common stock ranged from \$11.29 to \$30.56 per share, and during the current year through December 7, 2015, the closing sale price for our common stock has ranged from \$15.45 to \$30.25. The market prices for securities of medical technology companies like us historically have been highly volatile, and the market has experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies.

The ownership of our common stock is highly concentrated.

As of December 4, 2015, our directors and executive officers, together with members of their immediate families, as a group, beneficially owned in the aggregate approximately 49.6% of our outstanding capital stock, including 24.5% held by our director, Jack Schuler. Certain of our affiliates, including entities affiliated

Table of Contents

with Jack Schuler, and which together are our largest stockholders, have indicated an interest in purchasing an aggregate of up to \$50 million of the shares of our common stock offered hereby at the public offering price. The previously discussed ownership percentages do not reflect the potential purchase of any shares in this offering by such affiliates. As a result, these stockholders will be able to affect the outcome of, or exert significant influence over, all matters requiring stockholder approval, including the election and removal of directors and any change in control. In particular, this concentration of ownership of our common stock could have the effect of delaying or preventing a change in control of us or otherwise discouraging or preventing a potential acquirer from attempting to obtain control of us. This, in turn, could have a negative effect on the market price of our common stock. It could also prevent our stockholders from realizing a premium over the market prices for their shares of common stock. Moreover, the interests of this concentration of ownership may not always coincide with our interests or the interests of other stockholders. The concentration of ownership also contributes to the low trading volume and volatility of our common stock.

Future sales of shares of our common stock may depress the price of our shares and be dilutive to our existing stockholders.

We cannot predict whether future issuances of shares of our common stock or the availability of shares for resale in the open market will decrease the market price per share of our common stock. Any sales by us or by our existing stockholders of a substantial number of shares of our common stock in the public market, or the perception that such sales might occur, may cause the market price of our shares to decline. The exercise of any options or warrants, the issuance of our common stock in connection with acquisitions and other issuances of our common stock could have an adverse effect on the market price of the shares of our common stock.

To the extent that we raise additional funds through the sale of equity or convertible debt securities, the issuance of such securities will result in dilution to our stockholders. Investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be higher or lower than the price per share paid by investors in this offering. In addition, we have a significant number of options and warrants outstanding. If the holders of these options or warrants exercise such securities, you may incur further dilution.

We may require additional capital in the future, and you may incur dilution to your stock holdings.

We have primarily relied upon capital from the sale of our securities to fund our operations, and we expect that we will continue to incur operating losses until we are able to finalize the development of and commercialize the ID/AST System and sell it into the marketplace or license it to a third party. If capital requirements vary materially from those currently forecast by management, we may require additional capital sooner than expected. We may also require additional capital in the future to expand our product offerings, expand our sales and marketing infrastructure, increase our manufacturing capacity, fund our operations, and continue our research and development activities. Our future funding requirements will depend on many factors, including:

our ability to obtain marketing authorization from the FDA or clearance from the FDA to market our product candidates;

market acceptance of our product candidates, if cleared;

the cost and timing of establishing sales, marketing and distribution capabilities;

the cost of our research and development activities;

the ability of healthcare providers to obtain coverage and adequate reimbursement by third-party payors for procedures using our products;

Table of Contents

the cost and timing of marketing authorization or regulatory clearances;

the cost of goods associated with our product candidates;

the effect of competing technological and market developments; and

the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates, although we currently have no commitments or agreements to complete any such transactions.

If we require additional capital, we may attempt to raise it through a variety of strategies, including the issuance and sale of additional shares of our common stock. Issuances of additional shares of our common stock or preferred stock in the future, whether in connection with a rights offering, follow-on offering or otherwise, would dilute existing stockholders and may adversely affect the market price of our common stock.

We cannot assure you that we will be able to obtain additional funds on acceptable terms, or at all. Debt financing, if available, may involve covenants restricting our operations or our ability to incur additional debt. Any debt or additional equity financing that we raise may contain terms that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products, or grant licenses on terms that are not favorable to us. If we are unable to raise adequate funds, we may have to liquidate some or all of our assets or delay, reduce the scope of or eliminate some or all of our product development.

If we do not have, or are not able to obtain, sufficient funds, we may be required to delay development or commercialization of the ID/AST System or license to third parties the rights to commercialize our products or technologies that we would otherwise seek to commercialize ourselves. We also may have to reduce marketing, customer support or other resources devoted to our product candidates or cease operations. Any of these factors could harm our operating results.

Negative reports issued by securities analysts, and the election by securities analysts not to cover us, may have a negative impact on the market price of our common stock.

The trading market for our common stock may be affected in part by the research and reports that industry or financial analysts publish about us or our business, and our failure to achieve analyst earnings estimates. It may be difficult for companies such as ours, with smaller market capitalizations, to attract securities analysts that will cover our common stock. The lack of research coverage may adversely affect the market price of our common stock. If one or more of the analysts who elects to cover us downgrades our stock, our stock price may decline rapidly. If one or more of these analysts ceases coverage of our company, we could lose visibility in the market, which in turn may cause our stock price to decline.

We do not anticipate paying any cash dividends on our capital stock in the foreseeable future.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. Any future debt agreements may also preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

Provisions in our certificate of incorporation and bylaws and Delaware law may delay or prevent acquisition of our Company, which could adversely affect the value of our common stock.

Provisions contained in our certificate of incorporation and bylaws, as well as provisions of the Delaware General Corporation Law, could delay or make it more difficult to remove incumbent directors or for a third party to acquire us, even if a takeover would benefit our stockholders. For example, our board of directors may fill any vacancy on the board of directors, whether such vacancy occurs as a result of an increase in the number

Table of Contents

of directors or otherwise. Stockholders may only take action by written consent if acting unanimously. Special meetings of the stockholders may be called only by the President, a Vice President, our board of directors or the holders of not less than one-tenth of all the shares entitled to vote at the meeting. Additionally, our board of directors has the authority to cause us to issue, without any further vote or action by the stockholders, up to 5,000,000 shares of preferred stock, par value \$0.001 per share, in one or more series, to fix the number of shares constituting such series and the designation of such series, the voting powers, if any, of the shares of such series, and the preferences and relative, participating, optional or other special rights, if any, and any qualifications, limitations or restrictions thereof, of the shares of such series. The issuance of shares of preferred stock may have the effect of delaying, deferring or preventing a change in control of our company without further action by the stockholders, even where stockholders are offered a premium for their shares. Moreover, we are subject the provisions of Section 203 of the General Corporation Law of the State of Delaware, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

We will have broad discretion as to the use of the proceeds that we will receive from this offering and may not use the proceeds effectively.

We intend to use the net proceeds of this offering for general corporate purposes. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. Accordingly, we will retain broad discretion over the use of these 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, our management could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. Our failure to apply these funds effectively could have a material adverse effect on our business, impair or delay our ability to finalize the development of and commercialize the Accelerate ID/AST System and cause the price of our common stock to decline.

Table of Contents

Forward-looking statements

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein contain certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act), and we intend that such forward-looking statements be subject to the safe harbors created thereby.

These forward-looking statements, which can be identified by the use of words such as may, will, expect, intend, anticipate, estimate, pl continue, or variations thereon or comparable terminology, include, without limitation, our projections as to when certain key business milestones may be achieved, including initiation of the trial intended to support marketing authorization by the FDA of the ID/AST System and Blood Culture Assay Kit, the commercial launch of the ID/AST System, the potential of our technology, the growth of the market, our estimates as to the size of our market opportunity and potential pricing, our competitive position and estimates of time reduction to results, our future development plans and growth strategy, including the expansion of our sales force, and the intended use of the net proceeds from this offering. In addition, all statements other than statements of historical fact that address activities, events, or developments we expect, believe, or anticipate will or may occur in the future, and other such matters, are forward-looking statements.

The forward-looking statements included herein are based on current expectations that involve a number of risks and uncertainties. We discuss many of these risks and uncertainties in greater detail under the section captioned Risk factors in this prospectus supplement and in our other filings with the SEC incorporated by reference into this prospectus supplement. These forward-looking statements are based on certain assumptions, including that we will: retain key management personnel; be successful in the final development of and commercialization of the Accelerate ID/AST System; obtain sufficient capital to complete the final development and required clinical trials of the Accelerate ID/AST System; protect our intellectual property; respond effectively to technological change; and accurately anticipate market demand for our products. These forward-looking statements also assume that there will be no material adverse change in our operations, business and general market and industry conditions. Assumptions relating to the foregoing involve judgments with respect to, among other things, future economic, competitive and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond our control.

Although we believe that the assumptions underlying the forward-looking statements are reasonable, any of the assumptions could prove inaccurate and, therefore, there can be no assurance that the results contemplated in forward-looking statements will be realized. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement. Unless required by law, we undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Any investor in the Company should consider all risks and uncertainties disclosed in our SEC filings described below under the heading Where you can find more information and Important information incorporated by reference, all of which are accessible on the SEC s website at www.sec.gov.

Table of Contents

Use of proceeds

We estimate that the net proceeds to us from this offering after deducting underwriting discounts and commissions and estimated offering expenses payable by us will be approximately \$76.2 million (or approximately \$87.4 million if the underwriters exercise their option to purchase additional shares in full), based upon an assumed public offering price of \$17.16 per share, the last reported sale price of our common stock on The NASDAQ Capital Market on December 7, 2015, and assuming the purchase by certain of our affiliates of \$50 million of the offered shares.

We intend to use the net proceeds of this offering for general corporate purposes. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. Accordingly, we will retain broad discretion over the use of these proceeds. Pending application of the net proceeds as described above, we intend to invest the proceeds in investment-grade, interest-bearing securities.

S-34

Table of Contents**Price range of common stock**

Our common stock is traded under the symbol **AXDX** on The NASDAQ Capital Market. The following table sets forth, for the quarters indicated, the range of high and low sales prices for our common stock as reported by The NASDAQ Capital Market:

| | Price range | |
|---|--------------------|------------|
| | High | Low |
| 2015 | | |
| Fourth Quarter (through December 7, 2015) | \$ 18.85 | \$ 15.45 |
| Third Quarter | \$ 31.29 | \$ 14.77 |
| Second Quarter | \$ 28.97 | \$ 21.29 |
| First Quarter | \$ 26.66 | \$ 16.50 |
| 2014 | | |
| Fourth Quarter | \$ 30.49 | \$ 17.00 |
| Third Quarter | \$ 27.21 | \$ 15.37 |
| Second Quarter | \$ 31.86 | \$ 16.53 |
| First Quarter | \$ 21.95 | \$ 11.01 |
| 2013 | | |
| Fourth Quarter | \$ 16.45 | \$ 11.81 |
| Third Quarter | \$ 13.94 | \$ 6.86 |
| Second Quarter | \$ 9.22 | \$ 4.80 |
| First Quarter | \$ 8.99 | \$ 4.00 |

The last reported sale price of our common stock on The NASDAQ Capital Market on December 7, 2015 was \$17.16 per share. As of November 30, 2015, there were 142 holders of record of our common stock. This figure does not reflect the beneficial ownership of shares held in nominee name.

Dividend policy

We have never paid or declared any dividend on our common stock, and we do not anticipate paying cash dividends on any common stock in the foreseeable future. We intend to retain all of our future earnings, if any, to finance the growth and development of our business.

Table of Contents**Capitalization**

The following table sets forth our cash and cash equivalents and our capitalization as of September 30, 2015:

on an actual basis; and

on an as-adjusted basis to give effect to the sale by us pursuant to this offering of _____ shares of our common stock, and the application of the net proceeds from this offering as described in Use of proceeds.

You should read this table in conjunction with our audited consolidated financial statements and the related notes thereto appearing in our Annual Report on Form 10-K for the year ended December 31, 2014 and the unaudited consolidated financial statements and the related notes thereto appearing in our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2015, June 30, 2015 and September 30, 2015, all of which are incorporated by reference herein.

| | As of September 30, 2015 | |
|--|-------------------------------------|-----------------------|
| (dollars in thousands, except share and per share data) | Actual | As adjusted(1) |
| Cash and cash equivalents | \$ 25,191 | \$ |
| Stockholders' equity: | | |
| Common stock, \$0.001 par value per share; 55,000,000 shares authorized; 44,738,956 shares issued and outstanding, actual; _____ shares issued and outstanding, as adjusted(2) | 45 | |
| Preferred stock, \$0.001 par value per share; 5,000,000 shares authorized; 0 shares issued and outstanding, actual and as adjusted | | |
| Contributed capital | 137,893 | |
| Accumulated deficit | (97,752) | (97,752) |
| Accumulated other comprehensive income | 1 | 1 |
| Total stockholders' equity | \$ 40,187 | \$ |
| Total capitalization | \$ 40,187 | \$ |

(1) If the underwriters' option to purchase up to an additional _____ shares of our common stock is exercised in full, (i) an additional _____ shares of common stock would be issued and we would receive approximately \$ _____ million in additional net proceeds; and (ii) cash and cash equivalents, total stockholders' equity and total capitalization would each also increase by approximately \$ _____ million.

(2) The number of shares of our common stock that will be outstanding immediately after this offering is based on 44,738,956 shares outstanding as of November 30, 2015, and excludes as of that date the following:

6,168,227 shares of our common stock issuable upon the exercise of outstanding stock options at a weighted-average exercise price of \$6.88 per share;

40,250 shares of restricted common stock awards which have not yet vested;

Edgar Filing: Accelerate Diagnostics, Inc - Form 424B5

2,970,159 shares of our common stock reserved for future issuance under our 2012 Omnibus Equity Incentive Plan, as amended; and

an aggregate of 571,160 shares of our common stock issuable upon exercise of outstanding warrants at a weighted average exercise price of \$2.00 per share.

S-36

Table of Contents

Material U.S. federal income tax considerations

The following is a summary of the material United States federal income and, to a limited extent, estate tax consequences relating to the purchase, ownership and disposition of our common stock. Except where noted, this summary deals only with our common stock that is held as a capital asset (generally, property held for investment) by a non-U.S. holder (as defined below).

A non-U.S. holder means a beneficial owner of common stock (other than a partnership or entity treated as a partnership for United States federal income tax purposes) that is not for United States federal income tax purposes any of the following:

an individual who is a citizen or resident of the United States, including an alien individual who is a lawful permanent resident of the United States or who meets the substantial presence test under Section 7701(b) of the Internal Revenue Code of 1986, as amended (the Code);

a corporation (or any other entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;

an estate, the income of which is subject to United States federal income taxation regardless of its source; or

a trust if it (1) is subject to the primary supervision of a court within the United States and one or more United States persons (as defined in the Code) have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person.

This summary is based upon provisions of the Code and Treasury regulations, administrative rulings and judicial decisions, all as of the date hereof. Those authorities may be subject to different interpretations or changed, perhaps retroactively, so as to result in United States federal income and estate tax consequences different from those summarized below. This summary does not address all aspects of United States federal income and estate taxation and does not deal with foreign, state, local or other tax considerations that may be relevant to non-U.S. holders in light of their personal circumstances, including the impact of the Medicare contribution tax. In addition, this summary does not address tax considerations applicable to investors that may be subject to special treatment under the United States federal income tax laws such as (without limitation):

certain United States expatriates;

persons subject to the alternative minimum tax or the tax on net investment income;

stockholders that hold our common stock as part of a straddle, appreciated financial position, synthetic security, hedge, conversion transaction or other integrated investment or risk reduction transaction;

persons deemed to sell our common stock under the constructive sale provisions of the Code;

stockholders that acquired our common stock through the exercise of employee stock options or otherwise as compensation or through a tax-qualified retirement plan;

Edgar Filing: Accelerate Diagnostics, Inc - Form 424B5

stockholders that are partnerships or entities or arrangements treated as partnerships for United States federal income tax purposes, or other pass-through entities, or owners thereof;

financial institutions;

insurance companies;

tax-exempt entities;

S-37

Table of Contents

controlled foreign corporations, passive foreign investment companies, and corporations that accumulate earnings to avoid or which has the result of avoiding United States federal income tax;

dealers in securities or foreign currencies; and

traders in securities that use the mark-to-market method of accounting for United States federal income tax purposes.

If a partnership (including an entity treated as a partnership for United States federal income tax purposes) holds our common stock, the tax treatment of a partner in the partnership generally will depend upon the status of the partner, the activities of the partnership and certain determinations made at the partner level. If you are a partner in a partnership (including an entity treated as a partnership for United States federal income tax purposes) holding our common stock, you should consult your tax advisor.

We have not sought any ruling from the Internal Revenue Service (IRS) or an opinion of legal counsel, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions. INVESTORS CONSIDERING THE PURCHASE OF OUR COMMON STOCK SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE UNITED STATES FEDERAL INCOME AND ESTATE TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER THE LAWS OF ANY STATE, LOCAL OR FOREIGN TAXING JURISDICTION OR UNDER ANY APPLICABLE TAX TREATY.

Distributions

When we make distributions on our common stock, such distributions will constitute dividends for United States federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under United States federal income tax principles. Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that is applied against and reduces the non-U.S. holder's adjusted tax basis in our common stock, but not below zero. Any remaining distribution in excess thereof will be treated as gain realized on the sale or other disposition of our common stock and will be treated as described below under Gain on Disposition of Common Stock. Any dividend paid to a non-U.S. holder of our common stock that is not effectively connected with the non-U.S. holder's conduct of a trade or business within the United States will be subject to withholding of United States federal tax at a rate of 30%, or such lower rate as may be specified under an applicable income tax treaty, subject to the discussions below on backup withholding and FATCA (as defined below). In order to receive a reduced treaty rate, a non-U.S. holder must provide us with IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable (or an appropriate successor form), properly certifying eligibility for the reduced rate. If a non-U.S. holder holds our common stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to such agent and the non-U.S. holder's agent will then be required to provide certification to us, either directly or through other intermediaries. A non-U.S. holder that does not timely furnish the required certification, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

Dividends paid to a non-U.S. holder that are effectively connected with the conduct of a trade or business by the non-U.S. holder in the United States (or, if required by an applicable income tax treaty, are attributable to a United States permanent establishment or fixed base of the non-U.S. holder) generally will be exempt from the withholding tax described above and instead will be subject to United States federal income tax on a net income basis at the regular graduated United States federal tax rates in the same manner as if the non-U.S. holder were a United States person. In such case, we will not have to withhold United States federal tax if the non-U.S.

Table of Contents

holder complies with applicable certification and disclosure requirements. In order to obtain this exemption from withholding tax, a non-U.S. holder must provide us with an IRS Form W-8ECI properly certifying eligibility for such exemption. Any such effectively connected dividends received by a non-U.S. holder that is a corporation may be subject to an additional branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Gain on disposition of common stock

Subject to the discussions below on backup withholding and FATCA, any gain realized on the disposition of our common stock by a non-U.S. holder generally will not be subject to United States federal income tax unless:

the gain is effectively connected with the conduct of a trade or business by the non-U.S. holder in the United States (or, if required by an applicable income tax treaty, is attributable to a United States permanent establishment or fixed base of the non-U.S. holder);

the non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of that disposition, and certain other conditions are met; or

our common stock constitutes a U.S. real property interest by reason of our status as a United States real property holding corporation (USRPHC), for United States federal income tax purposes within the shorter of the five-year period preceding such disposition or such non-U.S. holder's holding period.

A non-U.S. holder who has gain that is described in the first bullet point immediately above will be subject to tax on the net gain derived from the disposition under regular graduated United States federal income tax rates in the same manner as if it were a United States person. In addition, a non-U.S. holder described in the first bullet point immediately above that is a corporation may be subject to the branch profits tax equal to 30% of its effectively connected earnings and profits or at such lower rate as may be specified by an applicable income tax treaty, as adjusted for certain items.

A non-U.S. holder who meets the requirements described in the second bullet point immediately above will be subject to a flat 30% tax (or a lower tax rate specified by an applicable tax treaty) on the gain derived from the disposition, which may be offset by certain United States source capital losses, even though the individual is not considered a resident of the United States, provided the non-U.S. holder has timely filed United States federal income tax returns with respect to such losses.

With respect to our status as a USRPHC, we believe that we currently are not and do not expect to become a USRPHC for United States federal income tax purposes.

Non-U.S. holders should consult their tax advisors with respect to the application of the foregoing rules to their ownership and disposition of our common stock and regarding potentially applicable income tax treaties that may provide for different rules.

Federal estate tax

If you are an individual, common stock owned or treated as owned by you at the time of your death will be included in your gross estate for United States federal estate tax purposes and may be subject to United States federal estate tax, unless an applicable estate tax treaty provides otherwise.

Information reporting and backup withholding

We must report annually to the IRS and to each non-U.S. holder the amount of dividends and distributions paid to such non-U.S. holder and any tax withheld with respect to such dividends and distributions, regardless of

Table of Contents

whether withholding was required. Copies of the information returns reporting such dividends and distributions and withholding also may be made available to the tax authorities in the country in which the non-U.S. holder resides or is established under the provisions of an applicable income tax treaty or agreement.

A non-U.S. holder will be subject to backup withholding for dividends and distributions paid to such non-U.S. holder unless such non-U.S. holder certifies under penalty of perjury that it is not a United States person (as defined in the Code), and the payor does not have actual knowledge or reason to know that such holder is a United States person, or such holder otherwise establishes an exemption. Information reporting and, depending on the circumstances, backup withholding will apply to the proceeds of a sale of our common stock within the United States or conducted through certain United States-related financial intermediaries, unless such non-U.S. holder certifies under penalty of perjury that it is not a United States person (as defined in the Code), and the payor does not have actual knowledge or reason to know that the non-U.S. holder is a United States person, or such non-U.S. holder otherwise establishes an exemption. The non-U.S. holder's certification requirement will generally be satisfied by providing a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E, or IRS Form W-8ECI (or appropriate successor form).

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a non-U.S. holder's United States federal income tax liability, if any, provided the required information is timely furnished to the IRS.

FATCA

Sections 1471 through 1474 of the Code and the regulations thereunder (generally referred to as FATCA) generally impose a withholding tax of 30% on any dividends and certain distributions on our common stock paid to a foreign financial institution, unless such institution enters into an agreement with the U.S. government to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity and debt holders, as well as certain account holders that are foreign entities with U.S. owners) or is otherwise exempt. FATCA also imposes a withholding tax of 30% on any dividends on our common stock paid to a non-financial foreign entity unless such entity provides the withholding agent with either certification that such entity does not have any substantial United States owners or identification of the direct and indirect U.S. owners of the entity. Finally, beginning January 1, 2019, IRS guidance indicates withholding of 30% also generally will apply to the gross proceeds of a disposition of our common stock paid to a foreign financial institution or to a non-financial foreign entity unless the reporting and certification requirements described above have been met. Withholding under FATCA is imposed on payments to foreign financial institutions and other applicable payees whether they receive such payments in the capacity of an intermediary or for their own account. Under certain circumstances, a non-U.S. holder of our common stock might be eligible for refunds or credits of such taxes. Foreign financial institutions and other entities located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules. Investors are encouraged to consult with their tax advisors regarding the possible implications of FATCA on their investment in our common stock and the entities through which they hold our common stock.

THE FOREGOING DISCUSSION IS FOR GENERAL INFORMATION ONLY AND SHOULD NOT VIEWED AS TAX ADVICE. INVESTORS CONSIDERING THE PURCHASE OF OUR COMMON STOCK ARE URGED TO CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF THE UNITED STATES FEDERAL AND ESTATE TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE APPLICABILITY AND EFFECT OF STATE, LOCAL OR FOREIGN TAX LAWS AND TREATIES.

Table of Contents**Underwriting**

We are offering the shares of common stock described in this prospectus supplement through a number of underwriters. J.P. Morgan Securities LLC and Piper Jaffray & Co. are acting as joint book-running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus supplement, the number of shares of common stock listed next to its name in the following table:

| Name | Number of shares |
|---------------------------------|---------------------|
| J.P. Morgan Securities LLC | |
| Piper Jaffray & Co. | |
| William Blair & Company, L.L.C. | |
| BTIG, LLC | |
| Total | |

The underwriters are committed to purchase all the common shares offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the common shares directly to the public at the initial public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$ per share. After the initial public offering of the shares, the offering price and other selling terms may be changed by the underwriters.

The underwriters have an option to buy up to additional shares of common stock from us. The underwriters have 30 days from the date of this prospectus supplement to exercise this option. If any shares are purchased with this option, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is \$ per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

| | Without option exercise | With full option exercise |
|-----------|-------------------------------|---------------------------------|
| Per share | \$ | \$ |
| Total | \$ | \$ |

Table of Contents

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately \$980,000. We have agreed to reimburse the underwriters for certain legal fees and expenses incurred by them in connection with this offering.

Certain of our affiliates, including entities affiliated with one of our directors, Jack Schuler, and which together are our largest stockholders, have indicated an interest in purchasing an aggregate of up to \$50 million of the shares of our common stock offered hereby at the public offering price. Because these indications of interest are not binding agreements or commitments to purchase, any or all of these entities may elect not to purchase any shares in this offering, or the underwriters may elect not to sell any shares in this offering to any or all of these entities. Any shares sold to such affiliates will be subject to the lock-up agreements described below. The underwriters will not receive any underwriting discount or commissions on the shares of our common stock purchased by such affiliates in this offering with regard to up to \$40 million of the shares sold to such affiliates.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

Our directors and executive officers, and certain of our significant shareholders have entered into lock-up agreements with the underwriters prior to the commencement of this offering, pursuant to which each of these persons or entities, with limited exceptions, for a period of 90 days after the date of this prospectus, may not, without the prior written consent of J.P. Morgan Securities LLC, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors, executive officers and shareholders in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant), or publicly disclose the intention to make any offer, sale, pledge or disposition, or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, or (3) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

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

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be covered shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares referred to above, or may be naked shorts, which are short positions in excess of

Table of Contents

that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through their option to purchase additional shares. 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 the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase shares of our common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on The NASDAQ Capital Market, in the over-the-counter market or otherwise.

In addition, in connection with this offering certain of the underwriters (and selling group members) may engage in passive market making transactions in our common stock on The NASDAQ Capital Market prior to the pricing and completion of this offering. Passive market making consists of displaying bids on The NASDAQ Capital Market no higher than the bid prices of independent market makers and making purchases at prices no higher than these independent bids and effected in response to order flow. Net purchases by a passive market maker on each day are generally limited to a specified percentage of the passive market maker's average daily trading volume in the common stock during a specified period and must be discontinued when such limit is reached. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of these transactions. If passive market making is commenced, it may be discontinued at any time.

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Selling restrictions

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the

Table of Contents

offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

United Kingdom

This document is only being distributed to and is only directed at (i) persons who are outside the United Kingdom or (ii) to investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order) or (iii) 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 (all such persons together being referred to as relevant persons). The securities are only available to, and any invitation, offer or agreement to subscribe for, purchase or otherwise acquire such securities will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), from and including the date on which the European Union Prospectus Directive (the EU Prospectus Directive) was implemented in that Relevant Member State (the Relevant Implementation Date) an offer of securities described in this prospectus may not be made to the public in that Relevant Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the EU Prospectus Directive, except that, with effect from and including the Relevant Implementation Date, an offer of securities described in this prospectus may be made to the public in that Relevant Member State at any time:

to any legal entity which is a qualified investor as defined under the EU Prospectus Directive;

to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150 natural or legal persons (other than qualified investors as defined in the EU Prospectus Directive); or

in any other circumstances falling within Article 3(2) of the EU Prospectus Directive, provided that no such offer of securities described in this prospectus shall result in a requirement for the publication by us of a prospectus pursuant to Article 3 of the EU Prospectus Directive. For the purposes of this provision, the expression an offer of securities to the public in relation to any securities 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 securities to be offered so as to enable an investor to decide to purchase or subscribe for the securities, as the same may be varied in that Member State by any measure implementing the EU Prospectus Directive in that Member State. The expression EU Prospectus Directive means Directive 2003/71/EC (and any amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State) and includes any relevant implementing measure in each Relevant Member State, and the expression 2010 PD Amending Directive means Directive 2010/73/EU.

Canada

The common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration*

Table of Contents

Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

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

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

Table of Contents

Legal matters

Certain legal matters in connection with this offering will be passed upon by Snell & Wilmer L.L.P., Phoenix, Arizona and Sidley Austin LLP, Chicago, Illinois. A partner of Sidley Austin LLP beneficially owns shares representing in the aggregate less than one percent of the total outstanding shares of our common stock. Certain legal matters in connection with this offering will be passed upon for the underwriters by Cooley LLP, San Diego, California.

Experts

The consolidated financial statements of the Company appearing in the Company's Annual Report on Form 10-K at December 31, 2014 and 2013 and for the years then ended, which are incorporated by reference into this prospectus supplement, have been audited by Ernst & Young LLP, independent registered public accounting firm, and the consolidated financial statements of the Company at December 31, 2012 and the five month period then ended, and at July 31, 2012 and the twelve month period then ended, by Comiskey & Company, P.C., independent registered public accounting firm, as set forth in their respective reports thereon, included therein, and incorporated herein by reference in reliance upon such reports given on the authority of such firms as experts in accounting and auditing.

Where you can find more information

We file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities we are offering under this prospectus supplement. This prospectus supplement and the accompanying prospectus do not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus supplement, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You may read and copy, at prescribed rates, any document we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including the Company. The SEC's website can be found at <http://www.sec.gov>. Our filings are also available to the public over the Internet at our website at www.acceleratediagnostics.com.

Information on any Company website, any subsection, page or other subdivision of any Company website or any website linked to by content on any Company website is not part of this prospectus, and you should not rely on that information unless that information is also in this prospectus supplement or the accompanying prospectus or incorporated by reference herein or therein.

Table of Contents

Important information incorporated by reference

The SEC allows us to incorporate by reference into this prospectus supplement the information contained in other documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. Any statement contained in any document incorporated or deemed to be incorporated by reference into this prospectus supplement shall be deemed to be modified or superseded, for purposes of this prospectus supplement, to the extent that a statement contained in or omitted from this prospectus supplement, or in any other subsequently filed document that also is or is deemed to be incorporated by reference into this prospectus supplement, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. We incorporate by reference the documents listed below, which have been filed by us and any future filings we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) until the offering is completed:

- (a) our Annual Report on Form 10-K for the year ended December 31, 2014 filed with the SEC on February 26, 2015;
- (b) the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2014 from our definitive proxy statement relating to our 2015 annual meeting of stockholders, filed with the SEC on April 8, 2015;
- (c) our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2015, June 30, 2015 and September 30, 2015, filed with the SEC on May 7, 2015, July 31, 2015 and November 2, 2015, respectively;
- (d) our Current Reports on Form 8-K filed with the SEC on March 23, 2015, April 17, 2015, May 14, 2015 and December 2, 2015; and
- (e) the description of our common stock set forth in the Registration Statement on Form 8-A filed with the SEC on December 26, 2012 (File No. 001-31822), including any amendments or reports filed for the purpose of updating such description.

Upon written or oral request, we will provide without charge to each person, including any beneficial owner, to whom a copy of the prospectus is delivered a copy of the documents incorporated by reference into this prospectus supplement (other than exhibits to such documents unless such exhibits are specifically incorporated by reference herein). You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

Accelerate Diagnostics, Inc.

3950 South Country Club, Suite 470

Tucson, Arizona 85714

(520) 365-3100

Attn: Corporate Secretary

Table of Contents

PROSPECTUS

\$150,000,000

Common Stock

Preferred Stock

Debt Securities

Warrants

Units

Accelerate Diagnostics, Inc., a Delaware corporation (us , we , our , Accelerate or the Company), may offer and sell from time to time, in one or more series or issuances and on terms that Accelerate will determine at the time of the offering, any combination of the securities described in this prospectus, up to an aggregate amount of \$150,000,000.

This prospectus may not be used to sell securities unless accompanied by a prospectus supplement, which will describe the method and the terms of the offering. We will provide you with specific amount, price and terms of the applicable offered securities in one or more supplements to this prospectus. You should carefully read this prospectus and the applicable prospectus supplement, as well as the documents incorporated or deemed to be incorporated by reference in this prospectus, before you purchase any of the securities offered hereby.

These securities may be offered and sold in the same offering or in separate offerings; to or through underwriters, dealers, and agents; or directly to purchasers. The names of any underwriters, dealers, or agents involved in the sale of our securities, their compensation and any over-allotment options held by them will be described in the applicable prospectus supplement. See Plan of Distribution.

Our common stock is listed on The NASDAQ Capital Market under the symbol AXDX. We will provide information in any applicable prospectus supplement regarding any listing of securities other than shares of our common stock on any securities exchange.

INVESTING IN OUR SECURITIES INVOLVES SIGNIFICANT RISKS. SEE RISK FACTORS BEGINNING ON PAGE 4 OF THIS PROSPECTUS AND IN THE APPLICABLE PROSPECTUS SUPPLEMENT BEFORE INVESTING IN ANY SECURITIES.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION, NOR ANY BANK REGULATORY AGENCY, 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 December 10, 2013.

Table of Contents

TABLE OF CONTENTS

| | Page |
|--|-------------|
| <u>About This Prospectus</u> | 1 |
| <u>Prospectus Summary</u> | 2 |
| <u>Risk Factors</u> | 4 |
| <u>Forward-Looking Statements</u> | 4 |
| <u>Use of Proceeds</u> | 4 |
| <u>Dividend Policy</u> | 5 |
| <u>Description of our Capital Stock</u> | 5 |
| <u>Description of the Debt Securities</u> | 7 |
| <u>Description of the Warrants</u> | 17 |
| <u>Description of the Units</u> | 18 |
| <u>Plan of Distribution</u> | 18 |
| <u>Legal Matters</u> | 21 |
| <u>Experts</u> | 21 |
| <u>Where You Can Find More Information</u> | 21 |
| <u>Information Incorporated by Reference</u> | 22 |

Table of Contents

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the United States Securities and Exchange Commission (the SEC), using a shelf registration process. Under this shelf process, we may, from time to time, offer or sell any combination of the securities described in this prospectus in one or more offerings up to a total amount of \$150,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add to, update or change information contained in the prospectus and, accordingly, to the extent inconsistent, information in this prospectus is superseded by the information in the prospectus supplement.

The prospectus supplement to be attached to the front of this prospectus may describe, as applicable: the terms of the securities offered; the initial public offering price; the price paid for the securities; net proceeds; and the other specific terms related to the offering of the securities.

You should only rely on the information contained or incorporated by reference in this prospectus and any prospectus supplement or issuer free writing prospectus relating to a particular offering. No person has been authorized to give any information or make any representations in connection with this offering other than those contained or incorporated by reference in this prospectus, any accompanying prospectus supplement and any related issuer free writing prospectus in connection with the offering described herein and therein, and, if given or made, such information or representations must not be relied upon as having been authorized by us. Neither this prospectus nor any prospectus supplement nor any related issuer free writing prospectus shall constitute an offer to sell or a solicitation of an offer to buy offered securities in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation. This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits.

You should read the entire prospectus and any prospectus supplement and any related issuer free writing prospectus, as well as the documents incorporated by reference into this prospectus or any prospectus supplement or any related issuer free writing prospectus, before making an investment decision. Neither the delivery of this prospectus or any prospectus supplement or any issuer free writing prospectus nor any sale made hereunder shall under any circumstances imply that the information contained or incorporated by reference herein or in any prospectus supplement or issuer free writing prospectus is correct as of any date subsequent to the date hereof or of such prospectus supplement or issuer free writing prospectus, as applicable. You should assume that the information appearing in this prospectus, any prospectus supplement or any document incorporated by reference is accurate only as of the date of the applicable documents, regardless of the time of delivery of this prospectus or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since that date.

Table of Contents

PROSPECTUS SUMMARY

This summary description about us and our business highlights selected information contained elsewhere in this prospectus or incorporated herein by reference. This summary is not complete and does not contain all of the information that you should consider before deciding to invest in our securities. We urge you to carefully read this entire prospectus and any applicable prospectus supplement, including each of the documents incorporated herein or therein by reference, including the Risk Factors section. In this prospectus, unless the context indicates otherwise, the terms Company, Accelerate, we, us, and our refer to Accelerate Diagnostics, Inc., a Delaware corporation.

Company Information

Accelerate Diagnostics, Inc. is a corporation organized under the laws of the State of Delaware. Since 2004, we have focused on developing and commercializing innovative instrumentation for the rapid identification and antibiotic susceptibility testing of infectious pathogens. The Company currently conducts no other significant business activities. Our website address is www.acceleratediagnostics.com. None of the information contained on, or that may be accessed through, our website is a prospectus or constitutes part of, or is otherwise incorporated into, this prospectus.

Our common stock is listed on The NASDAQ Capital Market under the symbol AXDX. Our principal executive offices are located at 3950 South Country Club Road, Suite 470, Tucson, Arizona 85714, and our telephone number is (520) 365-3100.

The Securities We May Offer

We may offer up to \$150,000,000 of common stock, preferred stock, debt securities, warrants and/or units in one or more offerings and in any combination. This prospectus provides you with a general description of the securities we may offer. A prospectus supplement, which we will provide each time we offer securities, will describe the specific amounts, prices and terms of the securities we determine to offer.

We may sell the securities to or through underwriters, dealers or agents or directly to purchasers or as otherwise set forth below under Plan of Distribution. We, as well as any agents acting on our behalf, reserve the sole right to accept and to reject in whole or in part any proposed purchase of securities. Each prospectus supplement will set forth the names of any underwriters, dealers, agents or other entities involved in the sale of securities described in that prospectus supplement and any applicable fee, commission or discount arrangements with them.

Common Stock

We may offer shares of our common stock, par value \$0.001 per share, either alone or underlying other registered securities convertible or exercisable into our common stock. The holders of our common stock are entitled to one vote per share on all matters to be voted on by the stockholders. Holders of our common stock are entitled to receive ratably the dividends, if any, as may be declared from time to time by our board of directors out of funds legally available for the payment of dividends, subject to rights, if any, of preferred stockholders. Currently, we do not pay a dividend. If there is a liquidation, dissolution or winding up of our company, holders of our common stock would be entitled to share in our assets remaining after the payment of liabilities and any preferential rights of any outstanding preferred stock. The holders of common stock have no preemptive, conversion or subscription rights.

Table of Contents

Preferred Stock

Our board of directors has the authority, without further action by the stockholders, to issue from time to time the preferred stock in one or more series, to fix the number of shares constituting such series and the designation of such series, the voting powers, if any, of the shares of such series, and the preferences and relative, participating, optional or other special rights, if any, and any qualifications, limitations or restrictions thereof, of the shares of such series. Each series of preferred stock will be more fully described in the particular prospectus supplement that will accompany this prospectus. Each series of preferred stock, if issued, will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions, rights in the event of our liquidation, dissolution or winding up, voting rights and rights to convert into common stock. We have no present plans to issue any shares of preferred stock nor are any shares of our preferred stock presently outstanding.

Warrants

We may issue warrants for the purchase of common stock, preferred stock or debt securities. We may issue warrants independently or together with other securities.

Debt Securities

We may offer secured or unsecured obligations in the form of one or more series of senior or subordinated debt. The senior debt securities and the subordinated debt securities are together referred to in this prospectus as the debt securities. The senior debt securities will have the same rank as all of our other unsubordinated debt. The subordinated debt securities generally will be entitled to payment only after payment of our senior debt. Senior debt generally includes all debt for money borrowed by us, except debt that is stated in the instrument governing the terms of that debt to be not senior to, or to have the same rank in right of payment as, or to be expressly junior to, the subordinated debt securities. We may issue debt securities that are convertible into shares of our common stock.

The senior and subordinated debt securities will be issued under separate indentures between us and a trustee. We have summarized the general features of the debt securities to be governed by the indentures.

The forms of these indentures have been filed as exhibits to the registration statement of which this prospectus forms a part. We encourage you to read these indentures. Instructions on how you can get copies of these documents are provided under the heading [Where You Can Find More Information](#).

Units

We may issue units comprised of one or more of the other classes of securities issued by us as described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit.

Table of Contents

RISK FACTORS

An investment in our securities involves a high degree of risk. The prospectus supplement applicable to each offering of our securities will contain a discussion of the risks applicable to an investment in our securities. 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 or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under the heading **Risk Factors** in our Transition Report on Form 10-K for the period ended December 31, 2012, all of which are incorporated herein by reference, and may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future and any prospectus supplement related to a particular offering. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations.

FORWARD-LOOKING STATEMENTS

This prospectus, each prospectus supplement and the information incorporated by reference in this prospectus and each prospectus supplement contain certain statements that constitute **forward-looking statements** within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. The words **anticipate, expect, believe, goal, plan, intend, estimate, may, will,** and similar expressions and variations are intended to identify forward-looking statements, but are not the exclusive means of identifying such statements. Those statements appear in this prospectus, any accompanying prospectus supplement and the documents incorporated herein and therein by reference, particularly in the sections entitled **Prospectus Summary, Risk Factors, Management s Discussion and Analysis of Financial Condition and Results of Operations and Business,** and include statements regarding the intent, belief or current expectations of the company and management that are subject to known and unknown risks, uncertainties and assumptions.

This prospectus, any prospectus supplement and the information incorporated by reference in this prospectus and any prospectus supplement also contain statements that are based on the current expectations of our company and management. You are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and that actual results may differ materially from those projected in the forward-looking statements as a result of various factors.

Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely upon forward-looking statements as predictions of future events. The events and circumstances reflected in the forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, including the securities laws of the United States and the rules and regulations of the SEC, we do not plan to publicly update or revise any forward-looking statements contained herein after we distribute this prospectus, whether as a result of any new information, future events or otherwise.

USE OF PROCEEDS

Unless otherwise indicated in the prospectus supplement, we will use the net proceeds from the sale of securities offered by this prospectus for general corporate purposes, which may include working capital, the repayment of debt obligations, other capital expenditures, research and development expenditures and/or acquisitions of new technologies or businesses. The timing and amount of our actual expenditures will be based on many factors; therefore, unless otherwise indicated in the prospectus supplement, our management will have broad discretion to

allocate the net proceeds of the offerings. The specific allocations of the proceeds we receive from the sale of our securities will be described in the applicable prospectus supplement.

Table of Contents

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock, and we do not currently intend to pay any cash dividends on our common stock in the foreseeable future. We expect to retain all available funds and future earnings, if any, to fund the development and growth of our business. Any future determination to pay dividends, if any, on our common stock will be at the discretion of our board of directors and will depend on, among other factors, our results of operations, financial condition, capital requirements and contractual restrictions.

DESCRIPTION OF OUR CAPITAL STOCK

The following information describes our common stock and preferred stock, as well as provisions of our certificate of incorporation and bylaws. This description is only a summary. You should also refer to our certificate of incorporation and bylaws, both as filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part.

General

Our authorized capital stock consists of 60,000,000 shares with a par value of \$0.001 per share, of which 55,000,000 shares are designated as common stock and 5,000,000 shares are designated as preferred stock. The only equity securities currently outstanding are shares of common stock. As of December 2, 2013, there were 41,469,521 shares of our common stock issued and outstanding.

The following is a summary of the material provisions of our common stock and preferred stock provided for in our certificate of incorporation and bylaws. For more detailed information about our capital stock, please see our certificate of incorporation and bylaws.

Common Stock

The holders of our common stock are entitled to one vote per share on all matters to be voted on by the stockholders. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of common stock are entitled to receive ratably such dividends as may be declared by the board of directors out of funds legally available therefor. If we liquidate, dissolve or wind up, holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preferences of any outstanding shares of preferred stock. Holders of common stock have no preemptive, conversion or subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are, and all shares of common stock to be outstanding upon completion of this offering will be, fully paid and nonassessable.

Our common stock is listed on The NASDAQ Capital Market under the symbol AXDX. The transfer agent for our common stock is Broadridge Corporate Issuer Solutions, Inc. Its address is 1717 Arch Street, Suite 1300, Philadelphia, Pennsylvania 19103, and its telephone number is (800) 733-1121.

Preferred Stock

The following description of preferred stock and the description of the terms of any particular series of preferred stock that we choose to issue hereunder and that will be set forth in the related prospectus supplement are not complete. These descriptions are qualified in their entirety by reference to our articles of incorporation and any amendments thereto relating to any series of preferred stock. The rights, preferences, privileges and restrictions of the preferred stock of each series will be fixed by the articles of amendment to the articles of incorporation relating to that series.

The prospectus supplement also will contain a description of certain United States federal income tax consequences relating to the purchase and ownership of the series of preferred stock that is described in the prospectus supplement.

Table of Contents

Under the terms of our certificate of incorporation, our board of directors has the authority, without further action by the stockholders, to issue from time to time the preferred stock in one or more series, to fix the number of shares constituting such series and the designation of such series, the voting powers, if any, of the shares of such series, and the preferences and relative, participating, optional or other special rights, if any, and any qualifications, limitations or restrictions thereof, of the shares of such series.

The prospectus supplement for a series of preferred stock will specify:

the maximum number of shares;

the designation of the shares;

the annual dividend rate, if any, whether the dividend rate is fixed or variable, the date or dates on which dividends will accrue, the dividend payment dates, and whether dividends will be cumulative;

the price and the terms and conditions for redemption, if any, including redemption at our option or at the option of the holders, including the time period for redemption, and any accumulated dividends or premiums;

the liquidation preference, if any, and any accumulated dividends upon the liquidation, dissolution or winding up of our affairs;

any sinking fund or similar provision, and, if so, the terms and provisions relating to the purpose and operation of the fund;

the terms and conditions, if any, for conversion or exchange of shares of any other class or classes of our capital stock or any series of any other class or classes, or of any other series of the same class, or any other securities or assets, including the price or the rate of conversion or exchange and the method, if any, of adjustment;

the voting rights; and

any or all other preferences and relative, participating, optional or other special rights, privileges or qualifications, limitations or restrictions.

The issuance of preferred stock will affect, and may adversely affect, the rights of holders of common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until our board of directors determines the specific rights attached to that preferred stock. The effects of issuing preferred stock could include one or more of the following:

restricting dividends on the common stock;

diluting the voting power of the common stock;

impairing the liquidation rights of the common stock; or

delaying or preventing changes in control or management of our company.

We have no present plans to issue any shares of preferred stock nor are any shares of our preferred stock presently outstanding. Preferred stock will be fully paid and nonassessable upon issuance.

Warrants

As of September 30, 2013, we had warrants outstanding to purchase an aggregate of 571,160 shares of our common stock. Such warrants provide for an exercise price of \$2.00 per share of common stock and are scheduled to expire on June 26, 2017.

Table of Contents

Summary of Certain Provisions of Certificate of Incorporation and Bylaws

Our certificate of incorporation and bylaws provide that our board of directors is comprised of one class of directors and that each director shall be elected for a term lasting until the next annual meeting of stockholders following his or her election, or until his or her successor is duly elected and qualified. Each director holds office until the expiration of his or her term and until such director's respective successor is elected and qualified, subject to such director's earlier death, resignation or removal.

The Company reserves the rights to repeal, alter, amend or rescind any provision contained in the certificate of incorporation or bylaws.

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

The Company is subject to the Delaware anti-takeover laws regulating corporate takeovers, including Section 203 of the Delaware General Corporation Law ("DGCL"). These anti-takeover laws prevent Delaware corporations from engaging in certain business combination transactions with interested stockholders (generally, stockholders owning 15% or more of the corporation's outstanding voting stock and their affiliates) for a period of three years following the time that such stockholder became an interested stockholder, except in certain situations. In addition, our certificate of incorporation and bylaws include a number of provisions that may deter or impede hostile takeovers or changes of control or management. These provisions include the following:

the authority of our board of directors to issue up to 5,000,000 shares of serial preferred stock and to determine the price, rights, preferences and privileges of such preferred stock without stockholder approval; and

cumulative voting is not allowed in the election of the Company's directors.

These provisions of Delaware law and our certificate of incorporation and bylaws could prohibit or delay mergers or other takeovers or changes of control of the Company and may discourage attempts by other companies to acquire us, even if such a transaction would be beneficial to the Company's stockholders.

DESCRIPTION OF THE DEBT SECURITIES

The debt securities may be either secured or unsecured and will either be our senior debt securities or our subordinated debt securities. The debt securities will be issued under one or more separate indentures between us and a trustee to be specified in an accompanying prospectus supplement. Senior debt securities will be issued under a senior indenture and subordinated debt securities will be issued under a subordinated indenture. Together, the senior indenture and the subordinated indenture are called indentures in this description. This prospectus, together with the applicable prospectus supplement, will describe the terms of a particular series of debt securities.

The following is a summary of selected provisions and definitions of the indentures and debt securities to which any prospectus supplement may relate. The summary of selected provisions of the indentures and the debt securities appearing below is not complete and is subject to, and qualified entirely by reference to, all of the provisions of the applicable indenture and certificates evidencing the applicable debt securities. For additional information, you should look at the applicable indenture and the certificate evidencing the applicable debt security that is filed as an exhibit to the registration statement that includes the prospectus or that will be filed on a Current Report on Form 8-K relating to the applicable offering. Other specific terms of the applicable indenture and debt securities will be described in the

applicable prospectus supplement. If any particular terms of the indenture or debt securities described in a prospectus supplement differ from any of the terms described below, then the terms described below will be deemed to have been superseded by that prospectus supplement.

Table of Contents

General

Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series.

We are not limited as to the amount of debt securities we may issue under the indentures. Unless otherwise provided in a prospectus supplement, a series of debt securities may be reopened to issue additional debt securities of such series.

The prospectus supplement relating to a particular series of debt securities will set forth:

whether the debt securities are senior or subordinated;

the offering price;

the title;

any limit on the aggregate principal amount;

the person who shall be entitled to receive interest, if other than the record holder on the record date;

the date or dates the principal will be payable;

the interest rate or rates, which may be fixed or variable, if any, the date from which interest will accrue, the interest payment dates and the regular record dates, or the method for calculating the dates and rates;

the place where payments may be made;

any mandatory or optional redemption provisions or sinking fund provisions and any applicable redemption or purchase prices associated with these provisions;

if issued other than in denominations of U.S. \$1,000 or any multiple of U.S. \$1,000, the denominations in which the debt securities shall be issuable;

if applicable, the method for determining how the principal, premium, if any, or interest will be calculated by reference to an index or formula;

if other than U.S. currency, the currency or currency units in which principal, premium, if any, or interest will be payable and whether we or a holder may elect payment to be made in a different currency;

the portion of the principal amount that will be payable upon acceleration of maturity, if other than the entire principal amount;

if the principal amount payable at stated maturity will not be determinable as of any date prior to stated maturity, the amount or method for determining the amount which will be deemed to be the principal amount;

if applicable, whether the debt securities shall be subject to the defeasance provisions described below under Satisfaction and discharge; defeasance or such other defeasance provisions specified in the applicable prospectus supplement for the debt securities;

any conversion or exchange provisions;

whether the debt securities will be issuable in the form of a global security;

any subordination provisions applicable to the subordinated debt securities if different from those described below under Subordinated debt securities ;

any paying agents, authenticating agents, security registrars or other agents for the debt securities, if other than the trustee;

Table of Contents

any provisions relating to any security provided for the debt securities, including any provisions regarding the circumstances under which collateral may be released or substituted;

any deletions of, or changes or additions to, the events of default, acceleration provisions or covenants; and

any other specific terms of such debt securities.

Unless otherwise specified in the prospectus supplement, the debt securities will be registered debt securities. Debt securities may be sold at a substantial discount below their stated principal amount, bearing no interest or interest at a rate which at time of issuance is below market rates. The U.S. federal income tax considerations applicable to debt securities sold at a discount will be described in the applicable prospectus supplement.

Exchange and transfer

Debt securities may be transferred or exchanged at the office of the security registrar or at the office of any transfer agent designated by us.

We will not impose a service charge for any transfer or exchange, but we may require holders to pay any tax or other governmental charges associated with any transfer or exchange.

In the event of any partial redemption of debt securities of any series, we will not be required to:

issue, register the transfer of, or exchange, any debt security of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption and ending at the close of business on the day of the mailing; or

register the transfer of or exchange any debt security of that series selected for redemption, in whole or in part, except the unredeemed portion being redeemed in part.

Initially, we will appoint the trustee as the security registrar. Any transfer agent, in addition to the security registrar initially designated by us, will be named in the prospectus supplement. We may designate additional transfer agents or change transfer agents or change the office of the transfer agent. However, we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

Global securities

The debt securities of any series may be represented, in whole or in part, by one or more global securities. Each global security will:

be registered in the name of a depository, or its nominee, that we will identify in a prospectus supplement;

be deposited with the depository or nominee or custodian; and

bear any required legends.

No global security may be exchanged in whole or in part for debt securities registered in the name of any person other than the depositary or any nominee unless:

the depositary has notified us that it is unwilling or unable to continue as depositary or has ceased to be qualified to act as depositary;

Table of Contents

an event of default is continuing with respect to the debt securities of the applicable series; or

any other circumstance described in a prospectus supplement has occurred permitting or requiring the issuance of any such security.

As long as the depositary, or its nominee, is the registered owner of a global security, the depositary or nominee will be considered the sole owner and holder of the debt securities represented by the global security for all purposes under the indentures. Except in the above limited circumstances, owners of beneficial interests in a global security will not be:

entitled to have the debt securities registered in their names;

entitled to physical delivery of certificated debt securities; or

considered to be holders of those debt securities under the indenture.

Payments on a global security will be made to the depositary or its nominee as the holder of the global security. Some jurisdictions have laws that require that certain purchasers of securities take physical delivery of such securities in definitive form. These laws may impair the ability to transfer beneficial interests in a global security.

Institutions that have accounts with the depositary or its nominee are referred to as participants. Ownership of beneficial interests in a global security will be limited to participants and to persons that may hold beneficial interests through participants. The depositary will credit, on its book-entry registration and transfer system, the respective principal amounts of debt securities represented by the global security to the accounts of its participants.

Ownership of beneficial interests in a global security will be shown on and effected through records maintained by the depositary, with respect to participants' interests, or any participant, with respect to interests of persons held by participants on their behalf.

Payments, transfers and exchanges relating to beneficial interests in a global security will be subject to policies and procedures of the depositary. The depositary policies and procedures may change from time to time. Neither any trustee nor we will have any responsibility or liability for the depositary's or any participant's records with respect to beneficial interests in a global security.

Payment and paying agents

Unless otherwise indicated in a prospectus supplement, the provisions described in this paragraph will apply to the debt securities. Payment of interest on a debt security on any interest payment date will be made to the person in whose name the debt security is registered at the close of business on the regular record date. Payment on debt securities of a particular series will be payable at the office of a paying agent or paying agents designated by us. However, at our option, we may pay interest by mailing a check to the record holder. The trustee will be designated as our initial paying agent.

We may also name any other paying agents in a prospectus supplement. We may designate additional paying agents, change paying agents or change the office of any paying agent. However, we will be required to maintain a paying

agent in each place of payment for the debt securities of a particular series.

All moneys paid by us to a paying agent for payment on any debt security that remain unclaimed for a period ending the earlier of:

10 business days prior to the date the money would be turned over to the applicable state; or

at the end of two years after such payment was due,
will be repaid to us thereafter. The holder may look only to us for such payment.

Table of Contents

No protection in the event of a change of control

Unless otherwise indicated in a prospectus supplement with respect to a particular series of debt securities, the debt securities will not contain any provisions that may afford holders of the debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction, whether or not such transaction results in a change in control.

Covenants

Unless otherwise indicated in a prospectus supplement with respect to a particular series of debt securities, the debt securities will not contain any financial or restrictive covenants.

Consolidation, merger and sale of assets

Unless otherwise indicated in a prospectus supplement with respect to a particular series of debt securities, we may not consolidate with or merge into any other person, in a transaction in which we are not the surviving corporation, or convey, transfer or lease our properties and assets substantially as an entirety to, any entity, unless:

the successor entity, if any, is a corporation, limited liability company, partnership, trust or other business entity existing under the laws of the United States, any State within the United States or the District of Columbia;

the successor entity assumes our obligations on the debt securities and under the indentures;

immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing; and

certain other conditions specified in the indenture are met.

Events of Default

Unless we indicate otherwise in a prospectus supplement, the following will be events of default for any series of debt securities under the indentures:

- (1) we fail to pay principal of or any premium on any debt security of that series when due;
- (2) we fail to pay any interest on any debt security of that series for 30 days after it becomes due;
- (3) we fail to deposit any sinking fund payment when due;

(4) we fail to perform any other covenant in the indenture and such failure continues for 90 days after we are given the notice required in the indentures; and

(5) certain events including our bankruptcy, insolvency or reorganization.

Additional or different events of default applicable to a series of debt securities may be described in a prospectus supplement. An event of default of one series of debt securities is not necessarily an event of default for any other series of debt securities.

The trustee may withhold notice to the holders of any default, except defaults in the payment of principal, premium, if any, interest, any sinking fund installment on, or with respect to any conversion right of, the debt securities of such series. However, the trustee must consider it to be in the interest of the holders of the debt securities of such series to withhold this notice.

Unless we indicate otherwise in a prospectus supplement, if an event of default, other than an event of default described in clause (5) above, shall occur and be continuing with respect to any series of debt securities, either the trustee or the holders of at least 25% in aggregate principal amount of the outstanding securities of that series may declare the principal amount and premium, if any, of the debt securities of that series, or if any debt securities of that series are original issue discount securities, such other amount as may be specified in the

Table of Contents

applicable prospectus supplement, in each case together with accrued and unpaid interest, if any, thereon, to be due and payable immediately.

If an event of default described in clause (5) above shall occur, the principal amount and premium, if any, of all the debt securities of that series, or if any debt securities of that series are original issue discount securities, such other amount as may be specified in the applicable prospectus supplement, in each case together with accrued and unpaid interest, if any, thereon, will automatically become immediately due and payable. Any payment by us on the subordinated debt securities following any such acceleration will be subject to the subordination provisions described below under Subordinated debt securities.

After acceleration, the holders of a majority in aggregate principal amount of the outstanding securities of that series may, under certain circumstances, rescind and annul such acceleration if all events of default, other than the non-payment of accelerated principal, or other specified amounts or interest, have been cured or waived.

Other than the duty to act with the required care during an event of default, the trustee will not be obligated to exercise any of its rights or powers at the request of the holders unless the holders shall have offered to the trustee reasonable indemnity. Generally, the holders of a majority in aggregate principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee.

A holder of debt securities of any series will not have any right to institute any proceeding under the indentures, or for the appointment of a receiver or a trustee, or for any other remedy under the indentures, unless:

- (1) the holder has previously given to the trustee written notice of a continuing event of default with respect to the debt securities of that series;
- (2) the holders of at least a majority in aggregate principal amount of the outstanding debt securities of that series have made a written request and have offered reasonable indemnity to the trustee to institute the proceeding; and
- (3) the trustee has failed to institute the proceeding and has not received direction inconsistent with the original request from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series within 60 days after the original request.

Holders may, however, sue to enforce the payment of principal, premium or interest on any debt security on or after the due date or to enforce the right, if any, to convert any debt security (if the debt security is convertible) without following the procedures listed in (1) through (3) above.

We will furnish the trustee an annual statement by our officers as to whether or not we are in default in the performance of the conditions and covenants under the indenture and, if so, specifying all known defaults.

Modification and Waiver

Unless we indicate otherwise in a prospectus supplement, the applicable trustee and we may make modifications and amendments to an indenture with the consent of the holders of a majority in aggregate principal amount of the

outstanding securities of each series affected by the modification or amendment.

We may also make modifications and amendments to the indentures for the benefit of holders without their consent, for certain purposes including, but not limited to:

providing for our successor to assume the covenants under the indenture;

adding covenants or events of default;

making certain changes to facilitate the issuance of the securities;

securing the securities;

Table of Contents

providing for a successor trustee or additional trustees;

curing any ambiguities or inconsistencies;

permitting or facilitating the defeasance and discharge of the securities; and

other changes specified in the indenture.

However, neither the trustee nor we may make any modification or amendment without the consent of the holder of each outstanding security of that series affected by the modification or amendment if such modification or amendment would:

change the stated maturity of any debt security;

reduce the principal, premium, if any, or interest on any debt security or any amount payable upon redemption or repurchase, whether at our option or the option of any holder, or reduce the amount of any sinking fund payments;

reduce the principal of an original issue discount security or any other debt security payable on acceleration of maturity;

change the place of payment or the currency in which any debt security is payable;

impair the right to enforce any payment after the stated maturity or redemption date;

if subordinated debt securities, modify the subordination provisions in a materially adverse manner to the holders;

adversely affect the right to convert any debt security if the debt security is a convertible debt security; or

change the provisions in the indenture that relate to modifying or amending the indenture.

Satisfaction and discharge; defeasance

We may be discharged from our obligations on the debt securities, subject to limited exceptions, of any series that have matured or will mature or be redeemed within one year if we deposit enough money with the trustee to pay all of the principal, interest and any premium due to the stated maturity date or redemption date of the debt securities.

Each indenture contains a provision that permits us to elect either or both of the following:

We may elect to be discharged from all of our obligations, subject to limited exceptions, with respect to any series of debt securities then outstanding. If we make this election, the holders of the debt securities of the series will not be entitled to the benefits of the indenture, except for the rights of holders to receive payments on debt securities or the registration of transfer and exchange of debt securities and replacement of lost, stolen or mutilated debt securities.

We may elect to be released from our obligations under some or all of any financial or restrictive covenants applicable to the series of debt securities to which the election relates and from the consequences of an event of default resulting from a breach of those covenants.

To make either of the above elections, we must irrevocably deposit in trust with the trustee enough money to pay in full the principal, interest and premium on the debt securities. This amount may be made in cash and/or U.S. government obligations or, in the case of debt securities denominated in a currency other than U.S. dollars, cash in the currency in which such series of securities is denominated and/or foreign government obligations. As a condition to either of the above elections, for debt securities denominated in U.S. dollars we must deliver to the trustee an opinion of counsel that the holders of the debt securities will not recognize income, gain or loss for U.S. federal income tax purposes as a result of the action.

Table of Contents

Foreign government obligations means, with respect to debt securities of any series that are denominated in a currency other than United States dollars:

direct obligations of the government that issued or caused to be issued the currency in which such securities are denominated and for the payment of which obligations its full faith and credit is pledged, or, with respect to debt securities of any series which are denominated in euros, direct obligations of certain members of the European Union for the payment of which obligations the full faith and credit of such members is pledged, which in each case are not callable or redeemable at the option of the issuer thereof;

obligations of a person controlled or supervised by or acting as an agency or instrumentality of a government described in the bullet above the timely payment of which is unconditionally guaranteed as a full faith and credit obligation by such government, which are not callable or redeemable at the option of the issuer thereof; or

any depository receipt issued by a bank as custodian with respect to any obligation specified in the first two bullet points and held by such bank for the account of the holder of such deposit any receipt, or with respect to any such obligation which is so specified and held.

Notices

Notices to holders will be given by mail to the addresses of the holders in the security register.

Governing law

The indentures and the debt securities will be governed by, and construed under, the laws of the State of New York.

No personal liability of directors, officers, employees and stockholders

No incorporator, stockholder, employee, agent, officer, director or subsidiary of ours will have any liability for any obligations of ours, or because of the creation of any indebtedness under the debt securities, the indentures or supplemental indentures. The indentures provide that all such liability is expressly waived and released as a condition of, and as a consideration for, the execution of such indentures and the issuance of the debt securities.

Regarding the trustee

The indentures limit the right of the trustee, should it become our creditor, to obtain payment of claims or secure its claims.

The trustee is permitted to engage in certain other transactions with us. However, if the trustee acquires any conflicting interest, and there is a default under the debt securities of any series for which it is trustee, the trustee must eliminate the conflict or resign.

The accompanying prospectus supplement will specify the trustee for the particular series of debt securities to be issued under the indentures.

Subordinated debt securities

The following provisions will be applicable with respect to each series of subordinated debt securities, unless otherwise stated in the prospectus supplement relating to that series of subordinated debt securities.

The indebtedness evidenced by the subordinated debt securities of any series is subordinated, to the extent provided in the subordinated indenture and the applicable prospectus supplement, to the prior payment in full, of all senior debt, including any senior debt securities, in cash or other payment satisfactory to the holders of senior debt.

Table of Contents

Upon any distribution of our assets upon any dissolution, winding up, liquidation or reorganization, whether voluntary or involuntary, marshalling of assets, assignment for the benefit of creditors, or in bankruptcy, insolvency, receivership or other similar proceedings, payments on the subordinated debt securities will be subordinated in right of payment to the prior payment in full in cash or other payment satisfactory to holders of senior debt of all senior debt.

In the event of any acceleration of the subordinated debt securities of any series because of an event of default with respect to the subordinated debt securities of that series, holders of any senior debt would be entitled to payment in full in cash or other payment satisfactory to holders of senior debt of all senior debt before the holders of subordinated debt securities are entitled to receive any payment or distribution.

In addition, the subordinated debt securities will be structurally subordinated to all indebtedness and other liabilities of our subsidiaries, including trade payables and lease obligations. This occurs because our right to receive any assets of our subsidiaries upon their liquidation or reorganization, and your right to participate in those assets, will be effectively subordinated to the claims of that subsidiary's creditors, including trade creditors, except to the extent that we are recognized as a creditor of such subsidiary. If we are recognized as a creditor of that subsidiary, our claims would still be subordinate to any security interest in the assets of the subsidiary and any indebtedness of the subsidiary senior to us.

We are required to promptly notify holders of senior debt or their representatives under the subordinated indenture if payment of the subordinated debt securities is accelerated because of an event of default.

Under the subordinated indenture, we may also not make payment on the subordinated debt securities if:

a default in our obligations to pay principal, premium, if any, interest or other amounts on our senior debt occurs and the default continues beyond any applicable grace period, which we refer to as a payment default;
or

any other default occurs and is continuing with respect to designated senior debt that permits holders of designated senior debt to accelerate its maturity, and the trustee receives a payment blockage notice from us or some other person permitted to give the notice under the subordinated indenture, which we refer to as a non-payment default.

We may and shall resume payments on the subordinated debt securities:

in case of a payment default, when the default is cured or waived or ceases to exist; and

in case of a nonpayment default, the earlier of when the default is cured or waived or ceases to exist or 179 days after the receipt of the payment blockage notice.

No new payment blockage period may start on the basis of a nonpayment default unless 365 days have elapsed from the effectiveness of the immediately prior payment blockage notice. No nonpayment default that existed or was continuing on the date of delivery of any payment blockage notice to the trustee shall be the basis for a subsequent payment blockage notice.

As a result of these subordination provisions, in the event of our bankruptcy, dissolution or reorganization, holders of senior debt may receive more, ratably, and holders of the subordinated debt securities may receive less, ratably, than our other creditors. The subordination provisions will not prevent the occurrence of any event of default under the subordinated indenture.

The subordination provisions will not apply to payments from money or government obligations held in trust by the trustee for the payment of principal, interest and premium, if any, on subordinated debt securities pursuant to the provisions described under Satisfaction and discharge; defeasance, if the subordination provisions were not violated at the time the money or government obligations were deposited into trust.

Table of Contents

If the trustee or any holder receives any payment that should not have been made to them in contravention of subordination provisions before all senior debt is paid in full in cash or other payment satisfactory to holders of senior debt, then such payment will be held in trust for the holders of senior debt.

Senior debt securities will constitute senior debt under the subordinated indenture.

Additional or different subordination provisions may be described in a prospectus supplement relating to a particular series of debt securities.

Definitions

Designated senior debt means our obligations under any particular senior debt in which the instrument creating or evidencing the same or the assumption or guarantee thereof, or related agreements or documents to which we are a party, expressly provides that such indebtedness shall be designated senior debt for purposes of the subordinated indenture. The instrument, agreement or other document evidencing any designated senior debt may place limitations and conditions on the right of such senior debt to exercise the rights of designated senior debt.

Indebtedness means the following, whether absolute or contingent, secured or unsecured, due or to become due, outstanding on the date of the indenture for such series of securities or thereafter created, incurred or assumed:

our indebtedness evidenced by a credit or loan agreement, note, bond, debenture or other written obligation;

all of our obligations for money borrowed;

all of our obligations evidenced by a note or similar instrument given in connection with the acquisition of any businesses, properties or assets of any kind;

our obligations:

as lessee under leases required to be capitalized on the balance sheet of the lessee under generally accepted accounting principles, or

as lessee under other leases for facilities, capital equipment or related assets, whether or not capitalized, entered into or leased for financing purposes;

all of our obligations under interest rate and currency swaps, caps, floors, collars, hedge agreements, forward contracts or similar agreements or arrangements;

all of our obligations with respect to letters of credit, bankers' acceptances and similar facilities, including reimbursement obligations with respect to the foregoing;

all of our obligations issued or assumed as the deferred purchase price of property or services, but excluding trade accounts payable and accrued liabilities arising in the ordinary course of business;

all obligations of the type referred to in the above clauses of another person and all dividends of another person, the payment of which, in either case, we have assumed or guaranteed, or for which we are responsible or liable, directly or indirectly, jointly or severally, as obligor, guarantor or otherwise, or which are secured by a lien on our property; and

renewals, extensions, modifications, replacements, restatements and refundings of, or any indebtedness or obligation issued in exchange for, any such indebtedness or obligation described in the above clauses of this definition.

Table of Contents

Senior debt means the principal of, premium, if any, and interest, including all interest accruing subsequent to the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowable as a claim in any such proceeding, on, and all fees and other amounts payable in connection with, our indebtedness. Senior debt shall not include:

any debt or obligation if its terms or the terms of the instrument under which or pursuant to which it is issued expressly provide it shall not be senior in right of payment to the subordinated debt securities or expressly provide that such indebtedness is on the same basis or junior to the subordinated debt securities; or

debt to any of our subsidiaries, a majority of the voting stock of which is owned, directly or indirectly, by us.

Subsidiary means an entity more than 50% of the outstanding voting stock of which is owned, directly or indirectly, by us or by one or more of our other subsidiaries or by a combination of us and our other subsidiaries. For purposes of this definition, *voting stock* means stock or other similar interests to us which ordinarily has or have voting power for the election of directors, or persons performing similar functions, whether at all times or only so long as no senior class of stock or other interests has or have such voting power by reason of any contingency.

DESCRIPTION OF THE WARRANTS

We may issue warrants for the purchase of common stock, preferred stock or debt securities or any combination thereof. Warrants may be issued independently or together with common stock, preferred stock or debt securities and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement. This summary of some provisions of the warrants is not complete. You should refer to the warrant agreement relating to the specific warrants being offered for the complete terms of the warrants.

The particular terms of any issue of warrants will be described in the prospectus supplement relating to the issue. Those terms may include:

the number of shares of common stock or preferred stock purchasable upon the exercise of warrants to purchase such shares and the price at which such number of shares may be purchased upon such exercise;

the designation, stated value and terms (including, without limitation, liquidation, dividend, conversion and voting rights) of the series of preferred stock purchasable upon exercise of warrants to purchase preferred stock;

the principal amount of debt securities that may be purchased upon exercise of a debt warrant and the exercise price for the warrants, which may be payable in cash, securities or other property;

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

United States Federal income tax consequences applicable to the warrants;

provision for changes to or adjustments in the exercise price; and

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

Holders of equity warrants will not be entitled to:

vote, consent or receive dividends;

receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter; or

exercise any rights as stockholders of Accelerate Diagnostics, Inc.

Table of Contents

Debt warrant certificates will be exchangeable for new debt warrant certificates of different denominations. Debt warrants may be exercised at the corporate trust office of the warrant agent or any other office indicated in the prospectus supplement. Prior to the exercise of their debt warrants, holders of debt warrants will not have any of the rights of holders of the debt securities purchasable upon exercise and will not be entitled to payment of principal or any premium, if any, or interest on the debt securities purchasable upon exercise.

DESCRIPTION OF THE UNITS

We may issue units comprised of one or more of the other classes of securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The units may be issued under unit agreements to be entered into between us and a unit agent, as detailed in the prospectus supplement relating to the units being offered. The prospectus supplement will describe:

the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances the securities comprising the units may be held or transferred separately;

a description of the terms of any unit agreement governing the units;

a description of the provisions for the payment, settlement, transfer or exchange of the units;

a discussion of material federal income tax considerations, if applicable; and

whether the units if issued as a separate security will be issued in fully registered or global form.

The descriptions of the units in this prospectus and in any prospectus supplement are summaries of the material provisions of the applicable agreements. These descriptions do not restate those agreements in their entirety and may not contain all the information that you may find useful. We urge you to read the applicable agreements because they, and not the summaries, define your rights as holders of the units. For more information, please review the forms of the relevant agreements, which will be filed with the SEC promptly after the offering of units and will be available as described under the heading **Where You Can Find More Information**.

PLAN OF DISTRIBUTION

We may sell the securities offered through this prospectus (i) to or through underwriters or dealers, (ii) directly to purchasers, including our affiliates, (iii) through agents, or (iv) through a combination of any these methods. The securities may be distributed at a fixed price or prices, which may be changed, market prices prevailing at the time of sale, prices related to the prevailing market prices, or negotiated prices. The prospectus supplement will include the following information:

the terms of the offering;

the names of any underwriters or agents;

the name or names of any managing underwriter or underwriters;

the purchase price of the securities;

the net proceeds from the sale of the securities;

any delayed delivery arrangements;

any underwriting discounts, commissions or agency fees and other items constituting underwriters or agents compensation;

any initial public offering price;

Table of Contents

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

any commissions paid to agents.

We may engage in at-the-market offerings into an existing trading market in accordance with Rule 415(a)(4). Any at-the-market offering will be through an underwriter or underwriters acting as principal or agent for us.

We may issue to the holders of our common stock on a pro rata basis for no consideration, subscription rights to purchase shares of our common stock or preferred stock. These subscription rights may or may not be transferable by stockholders. The applicable prospectus supplement will describe the specific terms of any offering of our common or preferred stock through the issuance of subscription rights, including the terms of the subscription rights offering, the terms, procedures and limitations relating to the exchange and exercise of the subscription rights and, if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of common or preferred stock through the issuance of subscription rights.

Sale Through Underwriters or Dealers

If underwriters are used in the sale, the underwriters will acquire the securities for their own account, including through underwriting, purchase, security lending or repurchase agreements with us. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions. Underwriters may sell the securities in order to facilitate transactions in any of our other securities (described in this prospectus or otherwise), including other public or private transactions and short sales. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise indicated in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers.

If dealers are used in the sale of securities offered through this prospectus, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. The prospectus supplement will include the names of the dealers and the terms of the transaction.

Direct Sales and Sales Through Agents

We may sell the securities offered through this prospectus directly. In this case, no underwriters or agents would be involved. Such securities may also be sold through agents designated from time to time. The prospectus supplement will name any agent involved in the offer or sale of the offered securities and will describe any commissions payable to the agent. Unless otherwise indicated in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. The terms of any such sales will be described in the prospectus supplement.

Delayed Delivery Contracts

If the prospectus supplement indicates, we may authorize agents, underwriters or dealers to solicit offers from certain types of institutions to purchase securities at the public offering price under delayed delivery contracts. These

contracts would provide for payment and delivery on a specified date in the future. The contracts would be subject only to those conditions described in the prospectus supplement. The applicable prospectus supplement will describe the commission payable for solicitation of those contracts.

Table of Contents

Market Making, Stabilization and Other Transactions

Unless the applicable prospectus supplement states otherwise, each series of offered securities will be a new issue and will have no established trading market. We may elect to list any series of offered securities on an exchange. Any underwriters that we use in the sale of offered securities may make a market in such securities, but may discontinue such market making at any time without notice. Therefore, we cannot assure you that the securities will have a liquid trading market.

Any underwriter may also engage in stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Rule 104 under the Securities Exchange Act. Stabilizing transactions involve bids to purchase the underlying security in the open market for the purpose of pegging, fixing or maintaining the price of the securities. Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover syndicate short positions.

Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

Derivative Transactions and Hedging

We, the underwriters or other agents may engage in derivative transactions involving the securities. These derivatives may consist of short sale transactions and other hedging activities. The underwriters or agents may acquire a long or short position in the securities, hold or resell securities acquired and purchase options or futures on the securities and other derivative instruments with returns linked to or related to changes in the price of the securities. In order to facilitate these derivative transactions, we may enter into security lending or repurchase agreements with the underwriters or agents. The underwriters or agents may effect the derivative transactions through sales of the securities to the public, including short sales, or by lending the securities in order to facilitate short sale transactions by others. The underwriters or agents may also use the securities purchased or borrowed from us or others (or, in the case of derivatives, securities received from us in settlement of those derivatives) to directly or indirectly settle sales of the securities or close out any related open borrowings of the securities.

Electronic Auctions

We may also make sales through the Internet or through other electronic means. Since we may from time to time elect to offer securities directly to the public, with or without the involvement of agents, underwriters or dealers, utilizing the Internet or other forms of electronic bidding or ordering systems for the pricing and allocation of such securities, you will want to pay particular attention to the description of that system we will provide in a prospectus supplement.

Such electronic system may allow bidders to directly participate, through electronic access to an auction site, by submitting conditional offers to buy that are subject to acceptance by us, and which may directly affect the price or other terms and conditions at which such securities are sold. These bidding or ordering systems may present to each bidder, on a so-called real-time basis, relevant information to assist in making a bid, such as the clearing spread at which the offering would be sold, based on the bids submitted, and whether a bidder's individual bids would be accepted, prorated or rejected. For example, in the case of debt security, the clearing spread could be indicated as a number of basis points above an index treasury note. Of course, many pricing methods can and may also be used.

Upon completion of such an electronic auction process, securities will be allocated based on prices bid, terms of bid or other factors. The final offering price at which securities would be sold and the allocation of securities among bidders would be based in whole or in part on the results of the Internet or other electronic bidding process or auction.

Table of Contents

General Information

Agents, underwriters, and dealers may be entitled, under agreements entered into with us, to indemnification by us against certain liabilities, including liabilities under the Securities Act. Our agents, underwriters, and dealers, or their affiliates, may be customers of, engage in transactions with or perform services for us, in the ordinary course of business.

The maximum consideration or discount to be received by any Financial Industry Regulatory Authority, or FINRA, member or independent broker dealer may not exceed 8.0% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

LEGAL MATTERS

Certain legal matters will be passed upon for us by Snell & Wilmer L.L.P., Phoenix, Arizona. Additional legal matters may be passed upon for us, or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements of Accelerate Diagnostics, Inc. appearing in our Transition Report on Form 10-K for the period ended December 31, 2012 have been audited by Comiskey & Company, P.C., an independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and other reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room.

We have filed with the SEC a registration statement under the Securities Act of 1933 relating to the offering of these securities. The registration statement, including the attached exhibits, contains additional relevant information about us and the securities. This prospectus does not contain all of the information set forth in the registration statement. You can obtain a copy of the registration statement, at prescribed rates, from the SEC at the address listed above. The registration statement and the documents referred to below under "Information Incorporated by Reference" are also available on our Internet website, www.acceleratediagnostics.com. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

Table of Contents

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the following documents filed with the SEC (excluding those portions of any Form 8-K that are not deemed filed pursuant to the General Instructions of Form 8-K):

our Transition Report on Form 10-K for the period ended December 31, 2012, filed with the SEC on March 20, 2013;

our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2013, June 30, 2013 and September 30, 2013, filed with the SEC on May 10, 2013, August 9, 2013 and November 8, 2013, respectively;

our Current Reports on Form 8-K filed with the SEC on March 12, 2013, June 10, 2013, July 2, 2013, July 12, 2013, August 13, 2013 and November 5, 2013 (excluding any information furnished in such reports under Item 2.02, Item 7.01 or Item 9.01); and

the description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on December 26, 2012, including any amendment or report filed for the purpose of updating such description. All reports and other documents that we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

This prospectus as supplemented may contain information that updates, modifies or is contrary to information in one or more of the documents incorporated by reference in this prospectus. You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus is accurate as of any date other than the date of this prospectus or the date of the documents incorporated by reference in this prospectus.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any or all documents that are incorporated by reference into this prospectus, but not delivered with the prospectus, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into the documents that this prospectus incorporates. You should direct written requests to:

Accelerate Diagnostics, Inc.

3950 South Country Club Road, Suite 470

Tucson, Arizona 85714

Edgar Filing: Accelerate Diagnostics, Inc - Form 424B5

Attention: Steve Reichling, Chief Financial Officer

Telephone: (520) 365-3100

Table of Contents

\$80,000,000

Common stock

Prospectus supplement

J.P. Morgan

Piper Jaffray

William Blair

BTIG

December , 2015