

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**FORM S-1**

Registration Statement Under The Securities Act of 1933

**Interpace Diagnostics Group, Inc.**

(Exact name of Registrant as specified in its charter)

**Delaware**

(State or other jurisdiction  
of incorporation or organization)

**3841**

(Primary Standard Industrial  
Classification Code Number)

**22-2919486**

(I.R.S. Employer  
Identification No.)

**Morris Corporate Center 1, Building A  
300 Interpace Parkway, Parsippany, NJ 07054  
(844) 405-9655**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Jack Stover**

**President and Chief Executive Officer**

**Interpace Diagnostics Group, Inc.**

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Approximate date of commencement of proposed sale to the public:

**As soon as practicable after this Registration Statement becomes effective.**

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer  
Non-accelerated filer

(Do not check if a smaller reporting company)

Accelerated filer  
Smaller reporting company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided in Section 7(a)(2)(B) of the Securities Act. [ ]

#### CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered(1)	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee
Common stock, \$0.01 par value per share	\$ (3)(4)	\$
Pre-funded warrants to purchase shares of common stock and common stock issuable upon exercise thereof	\$ (4)	\$
<b>Total</b>	<b>\$ 13,800,000</b>	<b>\$ 1,599.42</b>

- (1) Pursuant to Rule 416, the securities being registered hereunder include such indeterminate number of additional securities as may be issuable to prevent dilution resulting from stock splits, stock dividends or similar transactions.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) under the Securities Act.
- (3) Includes the offering price of additional securities that the underwriters have the option to purchase.
- (4) The proposed maximum offering price of the common stock proposed to be sold in the offering will be reduced on a dollar-for-dollar basis based on the offering price of any pre-funded warrants offered and sold in the offering, and as such the proposed aggregate maximum offering price of the common stock and pre-funded warrants (including the common stock issuable upon exercise of the pre-funded warrants), if any, is \$13,800,000.

**The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Commission, acting pursuant to Section 8(a), may determine.**

**The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is subject to completion, is not an offer to sell these securities, and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

Subject to completion, dated May , 2017



**Shares of Common Stock  
Pre-funded Warrants to Purchase Shares of Common Stock**

We are offering up to \_\_\_\_\_ shares of our common stock. We are also offering to each purchaser whose purchase of shares of common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% of our outstanding common stock immediately following the consummation of this offering, the opportunity to purchase, if the purchaser so chooses, pre-funded warrants, in lieu of shares of common stock that would otherwise result in the purchaser's beneficial ownership exceeding 4.99% of our outstanding common stock. Subject to limited exceptions, a holder of pre-funded warrants will not have the right to exercise any portion of its pre-funded warrants if the holder, together with its affiliates, would beneficially own in excess of 4.99% (or, at the election of the holder, 9.99%) of the number of shares of common stock outstanding immediately after giving effect to such exercise. Each pre-funded warrant will be exercisable for one share of our common stock. The purchase price of each pre-funded warrant will equal the price per share at which the shares of common stock are being sold to the public in this offering, minus \$0.01, and the exercise price of each pre-funded warrant will be \$0.01 per share. This offering also relates to the shares of common stock issuable upon exercise of any pre-funded warrants sold in this offering. For each pre-funded warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis. The shares of common stock and pre-funded warrants can only be purchased together in this offering but will be issued separately and will be immediately separable upon issuance.

Our common stock is listed on The Nasdaq Capital Market under the symbol "IDXG". The closing price of our common stock on May 17, 2017, as reported by The Nasdaq Capital Market, was \$2.35 per share. The public offering price per share of common stock and any pre-funded warrant will be determined between us and the underwriter at the time of pricing, and may be at a discount to the current market price. There is no established public trading market for the pre-funded warrants, and we do not expect a market to develop. In addition, we do not intend to apply for a listing of the pre-funded warrants on any national securities exchange.

	<b>Per Share</b>	<b>Per Pre-Funded Warrant</b>	<b>Total</b>
Public offering price <sup>(1)</sup>	\$	\$	\$
Underwriting discounts and commissions <sup>(2)</sup>	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

(1) The public offering price is \$ \_\_\_\_\_ per share of common stock and \$ \_\_\_\_\_ per pre-funded warrant.

(2) In addition, we have agreed to reimburse the underwriter for certain expenses. See “Underwriting” beginning on page 68 of this prospectus for additional information.

Maxim Group LLC, which we refer to as the “representative,” has agreed to act as the representative of the underwriters in connection with this offering. The underwriters may engage one or more selected dealers in this offering. The offering is being underwritten on a firm commitment basis. We have granted the underwriters an option for a period of 45 days from the date of this prospectus to purchase up to an additional \_\_\_\_\_ shares of our common stock at a price of \$ \_\_\_\_\_ per share, to cover over-allotments, if any.

**Investing in our securities involves a high degree of risk. See the section entitled “Risk Factors” beginning on page 17 of this prospectus and elsewhere in this prospectus for a discussion of information that should be considered in connection with an investment in our securities.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense. The securities are not being offered in any jurisdiction where the offer is not permitted.**

The underwriters expect to deliver the shares of common stock and any pre-funded warrants to purchasers on or about \_\_\_\_\_, 2017.

**Maxim Group LLC**

**The date of this prospectus is \_\_\_\_\_, 2017**

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You should rely only on the information contained in this prospectus or in any related free writing prospectus filed by us with the Securities and Exchange Commission, or the SEC. We have not, and the underwriters and their affiliates have not, authorized anyone to provide you with any information or to make any representation not contained in this prospectus. We do not, and the underwriters and their affiliates do not, take any responsibility for, and can provide no assurance as to the reliability of, any information that others may provide to you. This prospectus is not an offer to sell or an offer to buy securities in any jurisdiction where offers and sales are not permitted. The information in this prospectus is accurate only as of its date, regardless of the time of delivery of this prospectus or any sale of securities. You should also read and consider the information in the documents to which we have referred you under the caption “Where You Can Find More Information” in the prospectus. In addition, this prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “Where You Can Find More Information.”

You should assume that the information in this prospectus is accurate only as of the date on the front of this document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, or any sale of a security registered under the registration statement of which this prospectus is a part.

Neither we nor the underwriters have done anything that would permit a public offering of the securities or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus outside of the United States.

As used in this prospectus, unless the context indicates or otherwise requires, the “Company,” “we,” “us,” “our” or “Interpace” refer to Interpace Diagnostics Group, Inc., a Delaware corporation, and its subsidiaries.

This prospectus contains and incorporates by reference market data and industry statistics and forecasts that are based on our own internal estimates as well as independent industry publications and other publicly-available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. Although we are not aware of any misstatements regarding the market and industry data presented in this prospectus or the documents incorporated herein by reference, these estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under the headings “Risk Factors” in this prospectus, and under similar headings in the other documents that are incorporated herein by reference. Accordingly, investors should not place undue reliance on this information.

We have secured trademark registrations for the marks ThyGenX®, ThyraMIR®, PancraGEN® PATHFINDERTG® and Mirinform® in the United States, and Mirinform® with the World Intellectual Property Organization. This prospectus contains references to our trademarks. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references, or the lack thereof, are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies’ trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

## PROSPECTUS SUMMARY

*The following summary is qualified in its entirety by, and should be read together with, the more detailed information and financial statements and related notes thereto appearing elsewhere in this prospectus and incorporated by reference. Before you decide to invest in our securities, you should read the entire prospectus carefully, including the risk factors and the financial statements and related notes included in this prospectus and incorporated by reference.*

### Company Overview

We are a fully integrated commercial company that provides clinically useful molecular diagnostic tests and pathology services. We develop and commercialize molecular diagnostic tests and related first line assays principally focused on early detection of patients at high risk of cancer and leverage the latest technology and personalized medicine for improved patient diagnosis and management. We currently have three commercialized molecular diagnostic assays in the marketplace for which we are reimbursed by Medicare and multiple private payors: PancreGEN®, a pancreatic cyst and pancreaticobiliary solid lesion molecular test that can aid in pancreatic cyst diagnosis and pancreatic cancer risk assessment utilizing our proprietary PathFinder platform; ThyGenX®, which assesses thyroid nodules for risk of malignancy; and ThyraMIR®, which assesses thyroid nodules for risk of malignancy utilizing a proprietary micro-RNA gene expression assay. We are also in the process of “soft launching” while we gather additional market data, BarreGEN®, an esophageal cancer risk classifier for Barrett’s Esophagus that utilizes our PathFinder platform.

Our mission is to provide personalized medicine through molecular diagnostics and innovation to advance patient care based on rigorous science. We are leveraging our Clinical Laboratory Improvement Amendments, or CLIA, certified and College of American Pathologists, or CAP, accredited laboratories to develop and commercialize our assays and products. We aim to provide physicians and patients with diagnostic options for detecting genetic and other molecular mutations that are associated with gastrointestinal and endocrine cancer. Our customers consist primarily of physicians, hospitals and clinics.

With the completion of the sale of substantially all of our contract sales organization (CSO) business in December 2015 and transition of related activities through September 2016, we are now concentrating our efforts on our molecular diagnostics business by offering solutions for determining the presence of certain cancers to clinicians and their patients as well as providing prognostic pre-cancerous information, which we believe to be an expanding market opportunity. The global molecular diagnostics market is estimated to be \$6.45 billion and is a segment within the approximately \$60 billion in vitro diagnostics market. We believe that the molecular diagnostics market offers significant growth and strong patient value given the substantial opportunity it affords to lower healthcare costs by helping to reduce unnecessary surgeries and ensuring the appropriate frequency of monitoring. We are keenly focused on growing our test volumes, securing additional coverage and reimbursement, maintaining our current reimbursement and supporting revenue growth for our three commercialized innovative tests, introducing related first line product and service extensions, as well as expanding our business by developing and promoting synergistic products, like BarreGEN®, in our market.

In March 2016, we announced that we implemented a broad-based program to maximize efficiencies and cut costs as we focused on improving cash flows and profitability while completing our transition to a standalone molecular diagnostics business. In addition to reducing headcount, we realigned our compensation structure, consolidated positions, eliminated programs and development plans that did not have near term benefits, and streamlined and right-sized operating systems while reducing overhead. This was done while supporting the transition of our CSO business to the buyer of that business and continuing to shut-down less profitable CSO contracts that were not part of the sale of that business.

In August 2016, we announced that the New York State Department of Health had reviewed and approved ThyraMIR®, the Company's micro RNA gene-expression based test, for use in New York State. New York State accounts for approximately 5% of the 600,000 Thyroid Fine Needle Aspirate, or FNA, biopsies performed in the U.S. annually according to Thyroid Disease Manager. With this final approval ThyraMIR® is now available to patients across the U.S.

In October 2016, we announced that the New York State Department of Health had reviewed and approved for use ThyGenX®, our NextGen Sequencing oncogene panel for thyroid nodules. The New York State approval of ThyGenX® enables us to test specimens from patients in New York and therefore, enables us to market both ThyGenX® and ThyraMIR® together in that state. As ThyGenX® always precedes the running of ThyraMIR®, approximately 80% of ThyGenX® cases warranting reflex to a more sophisticated micro-RNA assessment via ThyraMIR®. Of the several states that require special licensure to provide testing to patients who reside in their jurisdiction, New York was the final state to issue a license.

Also, in October 2016, we announced completion, validation and launch of two new thyroid services, cytopathology services and slides as a primary specimen, further expanding our comprehensive support of physicians and health care institutions servicing thyroid patients. Our new cytopathology service is designed to assist physicians and clinics that prefer to have the initial FNA biopsy assessed by an independent third party versus having it performed on site.

We have been successfully expanding the reimbursement of our products in 2016 and 2017. In summary, three of our molecular diagnostics are now covered by Medicare by way of our local Medicare Administrative Carrier (MAC), Novitas Solutions, Inc. or Novitas Solutions. Specifically we have made the following progress with various payors in 2016 and 2017:

- In May 2017, we announced an agreement with a major healthcare system in Philadelphia for our two molecular tests for indeterminate thyroid nodules, ThyGenX and ThyraMIR.

- In April 2017, we announced that UnitedHealthcare, the largest health plan in the United States, has agreed to cover our ThyraMIR® test used in assessing indeterminate thyroid nodule fine needle aspirate (FNA) biopsies. The coverage is now in effect and is subject to members' specific benefit plan design. Our ThyGenX® and ThyraMIR assays are now covered for approximately 250 million patients nationwide, including through Medicare, national, and regional health plans.



- In December 2016, we announced that Aetna, the third largest health plan in the United States, agreed to cover our ThyraMIR® test for all of Aetna's approximately 46 million members nationwide, with coverage effective immediately.

- In April 2016, we announced that we received coverage for all of our products by Galaxy Health Network, a national managed care provider with over 3.5 million covered lives. Galaxy Health Network's Preferred Provider Organization includes a network of over 400,000 contracted physicians, 2,700 hospitals and 47,000 ancillary providers.

- In April 2016, we also announced new coding by Novitas Solutions, Inc., or Novitas Solutions, for PancaGEN®. Novitas Solutions has assigned a new molecular Current Procedural Terminology, or CPT, code to its PancaGEN® test for pancreatic cysts. Prior to this coding change, the test was covered under a miscellaneous chemistry code, which is used for billing a wide range of tests across the laboratory industry and does not effectively differentiate between technologies that have significantly different features and offer unique benefits to patients with specific diseases.

- In February 2016, we announced that we received Medicare approval for coverage of ThyraMIR®. As a result, ThyraMIR® is now accessible to more than 50 million Medicare covered patients nationwide effective December 14, 2015. ThyGenX® is already covered by Medicare. Therefore, the addition of coverage for ThyraMIR® provides Medicare covered patients the benefits of the ThyGenX®/ThyraMIR® combination test.

- In January 2016, we announced that Novitas Solutions issued a new local coverage determination, or LCD, for PancaGEN®. The LCD provides the specific circumstances under which PancaGEN® is covered. The new policy is non-conditional and may improve the efficiency of the testing process for doctors and patients. The LCD covers approximately 55 million patients, bringing the total patients covered for PancaGEN® to nearly 68 million.

### **Our Business**

In August 2014, we acquired certain assets from Asuragen Inc., or Asuragen, in the endocrine and thyroid cancer sectors, and in October 2014, we acquired our pancreatic and gastrointestinal assets from RedPath Integrated Technologies Inc., or RedPath. In December 2015, we sold the majority of the assets of our CSO business and became a dedicated molecular diagnostics and related first line assays company.

We are now a fully integrated commercial company focused principally on molecular diagnostics and improving patient care by resolving diagnostic uncertainty with evidence that is trustworthy and actionable. Our products and services uniquely combine genomic technology, clinical science and pathological review to provide answers that give physicians and patients a clear path forward and help avoid risky, costly surgeries that are often unnecessary.

Our goal is to drive shareholder value by demonstrating the value of our assays to improve patient outcomes and reducing the cost of healthcare.

The role of molecular diagnostic information in medical practice is evolving rapidly. The diagnosis of complex diseases as well as the role of molecular diagnostics in treatment decisions continue to expand to complement the first line evaluations typically performed by pathologists. Information at the molecular level enables one to understand more fully the makeup and specific subtype of disease to improve diagnosis. In many cases, the molecular diagnostic information derived can ultimately help guide treatment decisions as part of the standard of care. The ATA Guidelines suggest that molecular testing is appropriate in cases where standard cytology results are indeterminate and unclear. The American Society of Gastrointestinal Endoscopy (ASGE) published guidelines in 2016 that state “we suggest that molecular testing of the cyst be considered when initial ancillary testing of cytology and CEA is inconclusive and when test results may alter management.”

We deploy biomarker analysis combined with microRNA expression to improve diagnostic clarity for cancer. In our thyroid and pancreatic cancer indications, diagnosis can be ambiguous and can lead to indeterminate first line assessments and uncertainty among physicians regarding how to effectively treat patients. Accordingly, physicians may often select surgery due to lack of confirmation of disease progression. Our tests are designed to help provide clarity of diagnosis that can in turn guide treatment decisions often, eliminating costly, risky surgeries and other unnecessary medical procedures, helping to improve the lives of patients and saving the healthcare system money.

Patients typically access our tests through their physician during the diagnostic process. All of our testing services are made available through our clinical reference laboratories located in Pittsburgh, Pennsylvania and New Haven, Connecticut, which are each CLIA certified and CAP accredited. The Clinical Laboratory Improvement Amendments (CLIA) of 1988 are US federal regulatory standards that apply to all clinical laboratory testing performed on humans in the US, except clinical trials and basic research. The CAP Laboratory Accreditation Program was granted by the Centers for Medicare and Medicaid Services or (CMS) which allows CAP inspection instead of CMS inspection.

The published evidence supporting our tests demonstrates the robustness of our science and clinical studies. Patients and physicians can access our full list of publications on our website. We continue to build upon our extensive library of clinical evidence. We also expect to continue expanding our offerings in gastrointestinal and endocrinology cancers, as well as other cancer indications that we believe will benefit from our technology and approach.

We believe our focus on developing clinically useful tests that change patient care is enabling the company to continue to expand in this marketplace. Our thyroid assays, ThyGenX® and ThyraMIR®, are covered by our MAC, Novitas Solutions, and are now covered for more than 250 million people in the U.S. for use in thyroid cancer diagnosis. PancraGEN®, our assay for pancreatic cancer is also covered by Novitas Solutions and is now covered for more than 97 million people in the US.

## *Background*

The global molecular diagnostics market is projected to reach \$10.12 billion by 2021 from \$6.54 billion in 2016, at a CAGR of 9.1% from 2016 to 2021 according to Markets and Markets.

The molecular diagnostics segment is highly fragmented with numerous science-based companies that have developed clinical tests that are on the market or ready or near ready to be marketed. A vast majority of these companies have very limited experience bringing a test to market and many of them do not have the capital to build an infrastructure to effectively commercialize their tests. Due to their complexity, most molecular diagnostic tests require a specialized go-to-market strategy that includes messaging to physicians, hospitals and potentially patients and managed care organizations. Additionally, robust data and clinical studies are often necessary to demonstrate to physicians and managed care organizations the benefit and utility of the assays offered. We believe that developing and delivering these kinds of messages is one of our core strengths.

Oncology, which represents the third largest segment after infectious disease and blood screening, is one of the fastest growing segments of the molecular diagnostics market. The Centers for Medicare and Medicaid Services, or CMS, of the Department of Health and Human Services estimated in June 2014 that there were more than 5,900 independent clinical reference laboratories and specialty clinics, and more than 8,900 hospital-based laboratories, in the United States.

### *Our Molecular Diagnostic Tests*

We are developing and commercializing molecular diagnostic tests to detect genetic alterations that are associated with gastrointestinal and endocrine cancer risk, which are principally focused on early detection of cancer. Our tests assist healthcare providers in distinguishing between patients at high risk of cancer from those at low risk. Thus, as part of a comprehensive diagnostic and treatment plan, our tests allow healthcare providers to determine whether surgery or active surveillance is most appropriate. We believe our tests can help avoid unnecessary surgeries in patients at low risk, thereby reducing healthcare costs and potential risks associated with surgery.

We offer PancaGEN®, a molecular diagnostic test designed for assessing long-term risk of malignancy in pancreatic cysts and solid pancreaticobiliary lesions, ThyGenX®, a next-generation sequencing test in combination with ThyraMIR®, a novel microRNA gene expression classifier, designed to assist physicians in distinguishing between benign and malignant lesions in indeterminate thyroid nodules, and BarreGEN®, an assay for evaluating Barrett's Esophagus, an esophageal cancer risk classifier, which we distribute today to limited customers while we gather additional data, perform clinical studies, seek initial reimbursement and are looking for collaboration partners.

### *Gastrointestinal Cancer Tests*

Our current gastrointestinal cancer risk diagnostic test, PancaGEN® is based on our PathFinderTG platform, or PathFinder. PathFinder is designed to use advanced clinical algorithms to accurately stratify patients according to risk of cancer by assessing panels of DNA abnormalities in patients who have pancreaticobiliary lesions (cysts or solid masses) with potential for cancer. PathFinder is supported by our state of the art CLIA certified, and CAP accredited laboratory in Pittsburgh, Pennsylvania. Our Pittsburgh laboratory is our major commercial-scale and development Center of Excellence where we process the majority of our current and future oncology related tests, and we support our gastrointestinal development activities through this laboratory.

Accurate detection of pancreatic cancer risk is crucial. Pancreatic cancer is now the third leading cause of cancer deaths in the U.S. with an average survival rate of five years. PancaGEN® is designed to determine the risk of malignancy in pancreatic cysts and pancreaticobiliary solid lesions. We believe that PancaGEN® is the leading integrated molecular diagnostic test for determining risk of malignancy in pancreatic cysts currently available on the market. We currently estimate that the immediate addressable market for PancaGEN® is approximately 150,000 indeterminate cysts annually or approximately \$300 to \$350 million annually based on the current size of the patient population and current and anticipated reimbursement rates. To date, PancaGEN® has been used in about 30,000 clinical cases. The National Pancreatic Cyst Registry study published in Endoscopy in 2015 demonstrated the clinical validity of PancaGEN® and that it more accurately determined the malignant potential of pancreatic cysts than the International Consensus Guideline 2012 EUS criteria for detection of malignant pancreatic cystic lesions in the context of routine clinical care. The vast majority of all surgeries for pancreatic cysts are for non-malignant disease. The American College of Gastroenterology (ACG) 2015 Guidelines support the basic principle that too many pancreatic surgeries are being performed unnecessarily on benign lesions. In addition, the 2016 guidelines published by the American Society of Gastroenterology Endoscopy (ASGE) included a specific recommendation for use of molecular testing in specific circumstances where other types of testing and analysis have not provided sufficient data on which to determine the best course of action for patient treatment. Accordingly, we believe that PancaGEN® provides a highly reliable molecular diagnostic option for distinguishing between patients with pancreatic cysts who are at low or high risk of pancreatic cancer.

We have also developed a cancer risk diagnostic assay, BarreGEN®, which is designed to evaluate patients with Barrett's esophagus, an upper gastrointestinal condition that can progress into esophageal cancer. BarreGEN®, which utilizes our PathFinder platform, is distributed today on a limited basis while we gather additional data, perform clinical studies, seek initial reimbursement and are looking for collaboration partners. We preliminarily estimate that the total market is approximately \$2 billion annually based on the current size of the patient population and anticipated reimbursement rates comparable to those received currently for PancaGEN® for pancreatic lesions. We are planning to expand our initial soft launch of BarreGEN® in 2017 with certain key opinion leaders (KOL's) and seek to partner this product for development and marketing with a larger partner in the gastrointestinal diagnostic market.

#### *Endocrine Cancer Tests*

We currently market and sell a dual platform endocrine cancer risk diagnostic test. The incidence of thyroid nodules is on the rise. ThyGenX® is a next generation DNA and RNA sequencing oncogene panel and when applied to indeterminate FNA, provides a highly specific "rule-in" test with over 80% positive predictive value in predicting whether a patient's thyroid nodule is cancerous. ThyGenX® works synergistically with our second endocrine cancer diagnostic test ThyraMir®, which is based on microRNA and is designed to provide a highly sensitive "rule-out" test to accurately categorize a mutation negative indeterminate FNA as being benign or malignant. Our testing is performed in our state of the art CLIA certified, CAP accredited laboratories in Pittsburgh, Pennsylvania and New Haven, Connecticut. We estimate the total market for our endocrine cancer diagnostic tests is approximately \$350 million annually based on the current size of the patient population, estimated numbers of indeterminate FNAs and current and anticipated reimbursement rates. ThyGenX® is used by some customers as a base line oncogene panel assessment and approximately 80% of such users will reflex to also using ThyraMIR® as a more specific evaluation.

Endocrinologists evaluate thyroid nodules for possible cancer by collecting cells through fine needle aspirants or FNAs that are then analyzed by cytopathologists to determine whether or not a thyroid nodule is cancerous. It is estimated that up to 20% or up to approximately 100,000 of FNAs analyzed annually yield indeterminate results, meaning they cannot be diagnosed as definitely being malignant or benign by cytopathology alone. Traditionally, guidelines recommended that some patients with indeterminate cytopathology results undergo surgery to remove all or part of their thyroid to obtain an accurate diagnosis by looking directly at the thyroid tissue. Historically, in approximately 70% to 80% of these cases, the thyroid nodule proves to be benign. In addition to exposing a patient to unnecessary surgical risk and incurring costs, surgery can lead to a lifetime of thyroid hormone replacement therapy. Our ThyGenX<sup>®</sup> and ThyraMir<sup>®</sup> assays, are aimed at significantly improving the ability of physicians to determine an accurate diagnosis of an indeterminate FNA result.

### **Research and Development**

We conduct most of our research and development activities at our CLIA certified and CAP accredited laboratories in Pittsburgh, Pennsylvania and New Haven, Connecticut. Our research and development efforts currently focus on providing data and clinical studies and analyses necessary to support our existing products on the market. Additionally our research and development activities provide product line extension of our existing products as well as new product opportunities utilizing our proprietary platforms.

We will also focus our research and development efforts on enhancing existing molecular diagnostic tests as new research becomes available. We may enter collaborative relationships with research and academic institutions for the development of additional or enhanced molecular diagnostic tests to further increase the depth and breadth of our molecular diagnostic test offerings. Where appropriate, we may also enter into licensing agreements with our collaborative partners to both license intellectual property for use in our molecular diagnostic test panels as well as licensing such intellectual property out, as appropriate.

### **Our Strategy**

Our primary goal now is to build a leading commercial oncology-based diagnostics business focused on gastrointestinal and endocrine cancer markets. We seek to grow our molecular diagnostics business both organically as well as by selective partnering. The key elements of our strategy to achieve this goal include:

- Leveraging our predictable gastrointestinal and endocrinology businesses, PancraGEN<sup>®</sup>, ThyGenX<sup>®</sup> and ThyraMIR<sup>®</sup> and focusing on personalized medicine and early intervention related to cancer risk;
- Expanding our soft launch of BarreGEN<sup>®</sup>, our esophageal cancer risk classifier for Barrett's Esophagus that utilizes our PathFinder platform, to continue to gather data and seek key reimbursement support while seeking larger partners to collaborate with us and speed up full market introduction;
- Targeting synergistic product and service opportunities to distribute through our commercial structure;
- Developing and commercializing other related first-line assays and service offerings to assist in the awareness of our current products and services;
- Expanding our sales staff appropriately while supporting our products with high quality data and studies and seeking dependable and appropriate reimbursement rates; and
- Improving our awareness and opportunities in the public markets.

### **Recent Business Developments**

#### ***Note Exchange and Subsequent Conversion***

As part of our acquisition of RedPath Integrated Pathology, Inc., we issued a non-negotiable subordinated secured, non-interest bearing, promissory note, dated as of October 31, 2014, with an aggregate principal amount of \$10.7 million outstanding (the "RedPath Note"). In December 2016 we repaid \$1.33 million in principal of the RedPath Note resulting in an outstanding balance of \$9.34 million. The RedPath Note was subsequently acquired by an institutional investor for \$8.87 million on March 22, 2017. Also on that date we and the investor exchanged the RedPath Note for a senior secured convertible note in the aggregate principal amount of \$5.32 million and a senior secured non-convertible note in the aggregate principal amount of \$3.55 million. On April 18, 2017, we and the investor exchanged the senior secured non-convertible note for \$3.55 million of our senior secured convertible note. Between March 23, 2017 and April 18, 2017, the senior secured convertible notes were converted in full for 3,795,429 shares of our common stock. We no longer have any outstanding secured debt, and any security interests and liens related to our former secured debt have been or will be released and/or terminated upon the completion of applicable filings.

#### ***Recent Financings***

Since late December 2016, we closed on four equity offerings raising gross proceeds of \$14.1 million. The details are as follows:

- On December 22, 2016, we completed a registered direct public offering, which resulted in gross proceeds to us of approximately \$1.9 million, (net proceeds of \$1.7 million after expenses) of which approximately \$1.33 million was used to repay secured debt.
- On January 6, 2017, we completed a registered direct public offering (the “Second Registered Direct Offering”), to sell 630,000 shares of our common stock at a price of \$6.81 per share to certain institutional investors, which resulted in gross proceeds to us of approximately \$4.2 million.
- On January 25, 2017, we completed a registered direct public offering (the “Third Registered Direct Offering”), to sell 855,000 shares of our common stock and a concurrent private placement of warrants to purchase 855,000 shares of our common stock (the “Concurrent Warrants”), to the same investors participating in the Third Registered Direct Offering, or the Private Placement. The Concurrent Warrants and the shares of our common stock issuable upon the exercise of the Concurrent Warrants were not registered under the Securities Act and were sold pursuant to the exemption provided in Section 4(a)(2) under the Securities Act and Rule 506(b) of Regulation D promulgated thereunder. The shares of common stock sold in the Third Registered Direct Offering and the Concurrent Warrants issued in the concurrent Private Placement were issued separately but sold together at a combined purchase price of \$4.69 per share of common stock and accompanying Concurrent Warrant. The Third Registered Direct Offering and the Private Placement together resulted in gross proceeds to us of approximately \$4 million. We also used approximately \$1.0 million to satisfy the obligations due to five former senior executives.
- On February 8, 2017, we completed an underwritten, confidentially marketed public offering (“CMPO”), to sell 1,200,000 shares of our common stock at a price of \$3.00 per share. In addition, we granted the underwriters an option to purchase up to an additional 9% of the total number of shares of common stock sold by us in the CMPO, solely for the purpose of covering over-allotments, if any. The underwriters exercised the over-allotment option in full. The CMPO resulted in gross proceeds to us of approximately \$3.9 million.

***Blue Cross Blue Shield Agreement***

On January 3, 2017, we announced that we had entered into an agreement with the Blue Cross Blue Shield (BCBS) Association’s Center for Clinical Effectiveness “Evidence Street”, a program that provides us with the opportunity to provide available evidence for our molecular Thyroid and Pancreas tests, to support further coverage determinations among Blue Cross Blue Shield and other health plans.

***International Expansion – Agreement with Best Med Opinion Ltd***

On January 20, 2017, we announced that we had entered into an agreement with Best Med Opinion Ltd, or Best Med, of Tel Aviv, Israel, a provider of second opinion and clinical services for physicians and patients in Israel and several other countries. As part of this agreement, effective February 1, 2017, Best Med will provide physicians and patients with information regarding our ThyGenX®, ThyraMIR®, and PancreaGEN® tests, and when these tests are selected to support and inform treatment decisions, Best Med will manage the logistics associated with collecting and shipping samples to our CLIA certified, CAP accredited laboratories and report results back to the ordering physician. The agreement designates Best Med as the exclusive provider of our products for the country of Israel, and under the agreement, providers in Israel will be able to order all of our marketed molecular diagnostic products. The agreement is part of our international expansion efforts to leverage the opportunities for our products outside the U.S. market.

### ***Parsippany Lease***

On May 9, 2017, we entered into an agreement with our landlord for our Parsippany office space under a lease expiring in June 2017. The agreement settles a prior eviction action and the arrearages under the current lease as well as the rent and additional rent to become due for the months of May and June. We will pay the amounts due under the lease in six installments of \$25,000 commencing April 30, 2017 and ending on September 30, 2017 without any additional interest or late charges and with the balance of lease arrearages to be paid in one final payment on September 30, 2017. In the event the parties enter into a new lease, the amount of the final payment due September 30, 2017 will be reduced through application of the tenant credit provided for in a new lease agreement. We are currently negotiating a possible new lease for a smaller space with our Parsippany landlord.

### ***Other Amounts Owed***

Currently, we are seeking to restructure past due vendor and related claims of approximately \$4.0 million, which includes approximately \$2.0 million due to certain vendors with whom we had stopped making payments in September 2016. As of March 1, 2017 we reinitiated payments with certain of those vendors and are continuing negotiations with others regarding scheduled payments. In addition, as of May 1, 2017, we have outstanding royalty obligations totaling approximately \$0.9 million and \$0.3 million of outstanding state tax liabilities due to various taxing authorities.

Additionally, related to liabilities assumed pursuant to the Agreement and Plan of Merger, dated October 31, 2014, wherein we acquired ownership and licensing rights to the RedPath assets including Pancragen and other molecular diagnostic and laboratory tests, the Department of Justice has recently submitted a claim for \$0.5 million based on 2016 revenues. There may also be up to an additional \$1 million owed based upon 2017 revenues, related to a Settlement Agreement between RedPath and the United States of America, dated January 28, 2013. The Settlement Agreement relates to penalties assessed for improper submission of Medicare claims by RedPath Integrated Pathology, Inc. for the period October 1, 2010 to September 30, 2012.

### **Corporate Information**

We were originally incorporated in New Jersey in 1986 and began commercial operations as a Contract Sales Organization (CSO) in 1987. In connection with our initial public offering, we reincorporated in Delaware in 1998. We currently operate under one operating segment, which is our molecular diagnostic business. We conduct our business through our wholly-owned subsidiaries, Interpace LLC, which was formed in Delaware in 2013, and Interpace Diagnostics Corporation (formerly known as RedPath Integrated Pathology, Inc.), which was formed in Delaware in 2007. Our executive offices are located at Morris Corporate Center 1, Building A, 300 Interpace Parkway, Parsippany, New Jersey 07054. Our telephone number is (855) 776-6419.





Common stock to be outstanding after this offering	shares (assuming no sale of any pre-funded warrants are exercised).
Option to purchase additional shares	The underwriters have a 45-day option to purchase up to an additional shares of our common stock at a price of \$ per share to cover over-allotments, if any.
Use of proceeds	We estimate that the net proceeds to us from this offering will be approximately \$ , after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from the sale of the securities for working capital, trade payables, payment of legacy CSO obligations that were not assumed by Publicis, business investment, and general corporate purposes. <sup>1</sup> See “Use of Proceeds” on page of this prospectus.
Risk factors	You should carefully read and consider the information set forth under “Risk Factors” on page of this prospectus and the documents incorporated by reference herein before deciding to invest in our securities.
Lock-Up Agreements	We and all of our executive officers and directors will enter into lock-up agreements with the Underwriters. Under these agreements, we and each of these persons may not, without the prior written approval of Maxim, offer, sell, contract to sell or otherwise dispose of or hedge common stock or securities convertible into or exchangeable for common stock, subject to certain exceptions. The restrictions contained in these agreements will be in effect for a period of 180 days after the date of the closing of this offering. For more information, see “Underwriting” on page 68 of this prospectus.
Nasdaq Capital Market common stock symbol	IDXG
National Securities Exchange Listing	We do not intend to list the pre-funded warrants on any securities exchange or nationally recognized trading system.

<sup>1</sup> Pursuant to our Employment Agreement with Jack Stover, our President and Chief Executive Officer, dated October 30, 2016, Mr. Stover is entitled to receive a bonus equal to 3% of the net proceeds received by us in the offering, or approximately \$ .

The number of shares of common stock to be outstanding immediately after this offering is based on 8,788,604 shares of common stock outstanding as of May 5, 2017 and excludes:

- Shares of our common stock that may be issued upon exercise of prefunded warrants issued in this offering;
- 68,000 shares of our common stock issuable upon the settlement of restricted stock units, or RSUs, issued to our employees and directors;
- 84,963 shares of common stock issuable upon settlement of stock appreciation rights, or SARs, issued to our employees, at a weighted average exercise price of \$42.91 per share, of which 84,963 shares of common stock are vested and exercisable;
- 507,529 shares of common stock issuable upon exercise of outstanding options under our Amended and Restated 2004 Stock Award and Incentive Plan (the “2014 Plan”), of which 184,647 are subject to stockholder approval with respect to their grant and of an increase in the number of shares in the 2014 Plan; and
- 955,000 shares of common stock issuable upon the exercise of warrants outstanding at a weighted average exercise price of \$4.69 per share.

Unless otherwise indicated, all information contained in this prospectus assumes no exercise by the underwriters of their overallotment option.

## SUMMARY FINANCIAL DATA

The following tables presents summary condensed consolidated statements of comprehensive income (loss) for the periods indicated. The information is only a summary and should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, our Quarterly Report on Form 10-Q for the period ended March 31, 2017, and the financial information and related notes incorporated by reference in this prospectus. See “Incorporation of Certain Information by Reference” on page 76 of this prospectus and “Where You Can Find Additional Information” on page 75 of this prospectus. We have derived the following summary financial data for the (i) years ended December 31, 2016 and December 31, 2015 from our audited consolidated financial statements that are incorporated by reference in this prospectus and (ii) quarters ended March 31, 2017 and March 31, 2016 from our unaudited consolidated financial statements that are incorporated by reference in this prospectus.

### INTERPACE DIAGNOSTICS GROUP, INC. CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS (in thousands, except for per share data)

	<u>For The Years Ended</u>		<u>For the Period Ended</u>	
	<u>December 31, 2016</u>	<u>December 31, 2015</u>	<u>March 31, 2017</u>	<u>March 31, 2016</u>
Revenue, net	\$ 13,085	\$ 9,432	\$ 3,470	\$ 3,035
Gross profit	6,444	2,522	1,699	1,856
Operating (loss) income	(6,442)	(40,408)	3,698	(3,800)
Net (loss) income	(8,332)	(11,356)	2,414	(4,786)
Net (loss) income per basic share of common stock	\$ (4.59)	\$ (7.34)	\$ 0.56	\$ (2.69)
Net (loss) income per diluted share of common stock	\$ (4.59)	\$ (7.34)	\$ 0.55	\$ (2.69)
Weighted average number of common shares and common share equivalents outstanding:				
Basic	1,816	1,548	4,294	1,776
Diluted	1,816	1,548	4,384	1,776

## RISK FACTORS

*An investment in our securities, including our common stock and pre-funded warrants, involves a high degree of risk. You should carefully consider the risks described below and all of the other information contained in this prospectus and incorporated by reference into this prospectus, including our Annual Report on Form 10-K for the year ended December 31, 2016, our Quarterly Report on Form 10-Q for the period ended March 31, 2017 and our financial statements and related notes, before investing in our securities. If any of the possible events described in those sections or below actually occur, our business, business prospects, cash flow, results of operations or financial condition could be harmed. In this case, the trading price of our common stock could decline, and you might lose all or part of your investment.*

*The following is a discussion of the risk factors that we believe are material to us at this time. These risks and uncertainties are not the only ones facing us and there may be additional matters that we are unaware of or that we currently consider immaterial. All of these could adversely affect our business, business prospects, results of operations, financial condition and cash flows.*

### **RISKS RELATING TO OUR BUSINESS**

**There are substantial doubts about our ability to continue as a going concern due to our operating history of net losses, negative working capital and insufficient cash flows, and lack of liquidity to pay our current obligations and if we are unable to continue our business, our shares may have little or no value.**

Our ability to become a profitable operating company is dependent upon our ability to generate revenues and/or obtain financing adequate to support our cost structure. We do not currently have enough cash on hand to meet our obligations over the next twelve months, and we cannot provide our stockholders any assurance that we will be able to raise sufficient funding from the generation of revenue, the sale of our common stock, or through financing to sustain us over the next twelve months.

For the fiscal year ended December 31, 2016 and quarter ended March 31, 2017, we had an operating loss of \$6.4 million and operating income of \$3.7 million, respectively. As of March 31, 2017, we had cash and cash equivalents of \$7.1 million and current liabilities of \$13.0 million. From September 30, 2016 through December 31, 2016, we provided working capital by extending our payables primarily by not making timely payments on current obligations and debt incurred prior to the sale of our CSO business, entering into payment plans, negotiating termination agreements on commitments that were not useful to our current business and not paying certain severance obligations to terminated employees. We completed four public offerings and a private placement of warrants from December 22, 2016 through February 8, 2017, which resulted in aggregate gross proceeds to us of approximately \$14.1 million. Of that amount, we used approximately \$1.3 million to make the first principal payment on that certain Non-Negotiable Subordinated Secured Promissory Note, dated as of October 31, 2014, as amended, or the RedPath Note, on December 31, 2016 (which RedPath Note has since been acquired by an investor, exchanged with the Company for the Exchanged Notes and converted into common stock) and approximately \$1.0 million on February 27, 2017 to satisfy severance obligations due to five former senior executives. The proceeds from the public offerings and private placement have improved our overall cash position. However, we remain in default of certain of our current obligations and certain vendors have threatened litigation against us. The Company must also fund its operating deficit until a sustainable level of revenue is achieved. These factors have raised substantial doubts about our ability to continue as a going concern. We may need to attempt to raise additional equity capital by selling shares of common stock or other dilutive or non-dilutive means, if necessary. However, the doubts raised, relating to our ability to continue as a going concern, may make investing in our securities an unattractive investment for potential investors. These factors, among others, may make it difficult to raise any additional capital.

**Our molecular diagnostics business has limited revenue, and we expect to incur net losses for the foreseeable future and may never achieve or sustain profitability.**

In 2014, we acquired RedPath and certain assets from Asuragen. As a result, we now offer PancraGEN<sup>®</sup>, ThyGenX<sup>®</sup>, and ThyraMIR<sup>®</sup> and to a limited extent, BarreGEN<sup>®</sup>. The revenue generated from our molecular diagnostics business was \$13.1 million and \$3.5 million for the fiscal year ended December 31, 2016 and our quarter ended March 31, 2017, respectively. For the fiscal year ended December 31, 2016, our molecular diagnostics business had an operating loss of approximately \$6.4 million. For our quarter ended March 31, 2017, our molecular diagnostics business had operating income from continuing operations of approximately \$3.7 million. However, without the reversal of contingent consideration liabilities of \$5.8 million during the quarter ended March 31, 2017, we would have had an operating loss of \$2.1 million. Although we expect the revenue generated from our molecular diagnostics business to grow in the future, there can be no assurance that we will achieve revenue sufficient to offset expenses. Over the next several years, we expect to continue to devote resources to increase adoption of, and reimbursement for, our molecular diagnostic tests and to develop and acquire additional diagnostic solutions. However, our business may never achieve or sustain profitability, and our failure to achieve and sustain profitability in the future could have a material adverse effect on our business, financial condition and results of operations.

**We may not be able to fund the remaining obligations of our previously sold CSO business, which could have a material adverse effect on our business and results of operations.**

As a result of an Asset Purchase Agreement, dated as of October 30, 2015, by and between us and Publicis (“Asset Sale”), not all of our CSO obligations were assumed by Publicis. These obligations consist of up to \$2.5 million, in aggregate, of accounts payable, costs relating to the closeout of the portion of the CSO business that principally related to the provision of services for multiple non-competing brands for different clients, or the ERT Unit, which Publicis did not acquire in the Asset Sale, and termination of various vendor contracts that had been associated with the CSO business. As such, we continue to pay some of these obligations, but may not be able to satisfy all of these remaining obligations. If we are unable to satisfy all our remaining CSO obligations, our business and results of operations could be materially and adversely affected.

**Our profitability will be impaired by our obligations to make royalty and milestone payments to Asuragen.**

In connection with our acquisition of certain assets of Asuragen in 2014, we are obligated to make certain royalty and milestone payments. Under the Asuragen License Agreement, we owed \$500,000, all of which was paid in installments throughout 2016 and paid in full as of January 13, 2017. We are further obligated to pay royalties on the future net sales of the miR *Inform*® pancreas platform for a period of ten years following a qualifying sale, on the future net sales of the miR *Inform*® thyroid platform through August 13, 2024 and on certain other thyroid diagnostics tests for a period of ten years following a qualifying sale.

Even if we are able to successfully launch the above referenced diagnostic tests, our profitability will be impaired by our obligations to make royalty and milestone payments to Asuragen. Although we believe, under such circumstances, that the increase in revenue will exceed the corresponding royalty and milestone payments, our obligations to Asuragen could have a material adverse effect on our business, financial condition and results of operations if we are unable to manage our operating costs and expenses at profitable levels.

**Our inability to finance our business on acceptable terms in the future may limit our ability to develop and commercialize new molecular diagnostic solutions and technologies and grow our business, and potentially force us to seek bankruptcy protection.**

We expect capital expenditures and operating expenses to increase over the next several years as we expand our infrastructure and commercial operations. As of March 31, 2017, we had cash and cash equivalents of \$7.1 million, net accounts receivable of \$2.3 million, current assets of \$10.7 million and current liabilities of \$13.0 million. While the Company has made significant reductions in indebtedness, the Company is not yet cash flow positive from operations. Accordingly, due to the Company's operating deficit and obligations, we may need to finance our business in the future through collaborations, equity offerings, debt financings, licensing arrangements or other dilutive or non-dilutive means. Additional funding may not be available to us on acceptable terms, or at all. If we raise funds by issuing additional equity securities, dilution to our stockholders could result. Further, our ability to raise additional financing through equity offerings in the future may be more difficult and costly since we have lost our eligibility to use our registration statement on Form S-3 (File No. 333-207263) declared effective by the SEC on October 9, 2015 because we failed to file a timely Form 8-K. In addition, we granted each institutional investor who participated in the registered direct offering completed on January 6, 2017, the right, for a period of 15 months following January 6, 2017, or until April 6, 2018, to participate in any public or private offering by us of equity securities, subject to certain exceptions, up to such investor's pro rata portion of 50% of the securities being offered, or the Participation Right. If we fail to comply with the applicable provisions of the Participation Right or do not receive waivers from such investors, we may not be able to raise funds through another equity offering. The incurrence of additional indebtedness or the issuance of certain equity securities could result in increased fixed payment obligations and could also result in restrictive covenants, such as limitations on our ability to incur additional debt or issue additional equity, limitations on our ability to acquire or license intellectual property rights, and other operating restrictions that could adversely affect our ability to conduct our business.

**Our financial results currently depend solely on sales of our molecular diagnostic tests, and we will need to generate sufficient revenue from these and other molecular diagnostic solutions that we develop or acquire to grow our business.**

The majority of our revenue currently is derived from the sale of our molecular diagnostic tests, which we initially launched commercially in the second half of 2014. We have several additional molecular diagnostics tests and complimentary service extensions that we have recently launched or are in late stage development, but there can be no assurance that we will be able to successfully commercialize or sufficiently grow those tests. If we are unable to increase sales of our molecular diagnostic tests, expand reimbursement for these tests, or successfully develop and commercialize other molecular diagnostic tests, our revenue and our ability to achieve and sustain profitability would be impaired, and this could have a material adverse effect on our business, financial condition and results of operations.

**We have a limited operating history as a molecular diagnostics company, which may make it difficult for you to evaluate the success of our business to date and to assess our future viability.**

We were originally incorporated in New Jersey in 1986 and began commercial operations in 1987. In connection with our initial public offering, we re-incorporated in Delaware in 1998. From 1987 until the Asset Sale described below, our operations focused primarily on our CSO business, which was the personal promotion of pharmaceutical customers' products through outsourced sales teams. We now conduct our molecular diagnostics business through our wholly owned subsidiaries, Interpace LLC, which was formed in Delaware in 2013, and Interpace Diagnostics Corporation, which was formed in Delaware in 2007. We began our own commercial sales of our molecular diagnostic tests in late 2014. Consequently, any evaluations about our future success, performance or viability may not be as accurate as they could be if we had a longer operating history.

**Recent changes in our senior management team and the lack of shared experience among the current members of our senior management team could negatively affect our results of operations and our business may be harmed.**

Effective as of December 22, 2015, our President and Chief Executive Officer resigned and also resigned as a member of our Board. Our Board appointed Jack E. Stover, previously Chairman of our Audit Committee, as Interim President and Chief Executive Officer, and subsequently, effective June 21, 2016, Mr. Stover was appointed President and Chief Executive Officer. Additionally, in light of the departure of our previous Chief Financial Officer, James Early was appointed as Chief Financial Officer effective as of October 11, 2016. Mr. Early also serves as our principal accounting officer. From August 29, 2016 until October 11, 2016, Mr. Early was engaged by us as a consultant to perform the role of interim chief financial officer.

As a result of these changes, we may experience disruption or have difficulty in maintaining or developing our business during this transition. Further, our senior management team has limited experience working together as a group. This lack of shared experience could negatively impact our senior management team's ability to quickly and efficiently respond to problems and effectively manage our business. If our management team is not able to work together as a group, our results of operations may suffer and our business may be harmed.



**The loss of members of our senior management team or our inability to attract and retain key personnel could adversely affect our business.**

As a small company with 63 employees, the success of our business depends largely on the skills, experience and performance of members of our senior management team and others in key management positions. The efforts of these persons will be critical to us as we continue to grow our molecular diagnostics business and develop and/or acquire additional molecular diagnostic tests. If we were to lose one or more of these key employees, we may experience difficulties in competing effectively, developing our technologies and implementing our business strategy. In addition, our commercial laboratory operations depend on our ability to attract and retain highly skilled scientists, including licensed clinical laboratory scientists. We may not be able to attract or retain qualified scientists and technicians in the future due to the competition for qualified personnel, and we may have to pay higher salaries to attract and retain qualified personnel. We may also be at a disadvantage in recruiting and retaining key personnel as our small size, limited resources, limited liquidity, work force reductions in late 2015 and recent changes in our senior management team may be viewed as providing a less stable environment, with fewer opportunities than would be the case at one of our larger competitors. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience constraints that could adversely affect our ability to support our clinical laboratory and commercialization.

**We depend on a few payors for a significant portion of our revenue, and if one or more significant payors stops providing reimbursement or decreases the amount of reimbursement for our molecular diagnostic tests, our revenue could decline.**

Due to the age of our typical patients, the majority of our gastrointestinal patients are Medicare based while the majority of our endocrine patients are covered by commercial insurance carriers. Accordingly, our success in adding and obtaining commercial carriers has been more significant for our thyroid assays.

Revenue for tests performed on patients covered by Medicare was approximately 41% of our total net revenue for the fiscal year ended December 31, 2016 and 41% of total net revenue for the quarter ended March 31, 2017. The percentage of our revenue derived from significant payors is expected to fluctuate from period to period as our revenue increases, as additional payors provide reimbursement for our molecular diagnostic tests or if one or more payors were to stop reimbursing for our molecular diagnostic tests or change their reimbursed amounts.

Since September 2012, Novitas Solutions has been the regional MAC that handles claims processing for Medicare services with jurisdiction for PancraGEN<sup>®</sup>, ThyGenX<sup>®</sup>, ThyraMIR<sup>®</sup> and BarreGEN<sup>®</sup>. On a five-year rotational basis, Medicare requests bids for its regional MAC services. Any future changes in the MAC processing or coding for Medicare claims for our molecular diagnostic tests could result in a change in the coverage or reimbursement rates for such molecular diagnostic tests, or the loss of coverage.

Our PancreGEN<sup>®</sup> and ThyGenX<sup>®</sup> tests are reimbursed by Medicare based on applicable CPT codes. PancreGEN<sup>®</sup> is currently reimbursed by Medicare at \$3,038 per test, ThyGenX<sup>®</sup> is currently reimbursed by Medicare at \$1,054 a test and ThyraMIR<sup>®</sup> is currently reimbursed by Medicare at \$2,110. Presently, our BarreGEN<sup>®</sup> assay is not reimbursed at all. Any future reduction from the current rate would have a material adverse effect on business and results of operations.

Although we have entered into contracts with certain third-party payors which establish in-network allowable rates of reimbursement for our molecular diagnostic tests, payors may suspend or discontinue reimbursement at any time, may require or increase co-payments from patients, or may reduce the reimbursement rates paid to us. Any such actions could have a negative effect on our revenue.

**If payors do not provide reimbursement, rescind or modify their reimbursement policies or delay payments for our tests, or if we are unable to successfully negotiate additional reimbursement contracts, our commercial success could be compromised.**

Physicians may generally not order our tests unless payors reimburse a substantial portion of the test price. There is typically uncertainty concerning third-party reimbursement of any test incorporating new molecular diagnostic technology. Reimbursement by a payor may depend on a number of factors, including a payor's determination that tests such as our molecular diagnostic tests are: (a) not experimental or investigational; (b) pre-authorized and appropriate for the patient; (c) cost-effective; (d) supported by peer-reviewed publications; and (e) included in clinical practice guidelines. Since each payor generally makes its own decision as to whether to establish a policy or enter into a contract to reimburse our tests, seeking these approvals is a time-consuming and costly process. Although we have contracted rates of reimbursement with certain payors, which establishes in-network allowable rates of reimbursement for our PancreGEN<sup>®</sup>, ThyGenX<sup>®</sup>, and ThyraMIR<sup>®</sup> tests, payors may suspend or discontinue reimbursement at any time, may require or increase co-payments from patients, or may reduce the reimbursement rates paid to us. Any such actions could have a negative effect on our revenue.

We have contracted rates of reimbursement with payors for our PancreGEN<sup>®</sup>, ThyGenX<sup>®</sup> and ThyraMIR<sup>®</sup> tests. Without a contracted rate for reimbursement, claims may be denied upon submission, and we may need to appeal the claims. The appeals process is time consuming and expensive, and may not result in payment. We expect to continue to focus resources on increasing adoption of and coverage and reimbursement for our molecular diagnostic tests. We cannot, however, predict whether, under what circumstances, or at what payment levels payors will reimburse us for our molecular diagnostic tests, if at all. In addition, the launch of our molecular diagnostic tests, PancreGEN<sup>®</sup>, ThyGenX<sup>®</sup>, ThyraMIR<sup>®</sup> and BarreGEN<sup>®</sup> and any other new products we may acquire or develop in the future may require that we expend substantial time and resources in order to obtain and retain reimbursement. Also, payor consolidation is underway and creates uncertainty as to whether coverage and contracts with existing payors will remain in effect. Finally, commercial payors may tie their allowable rates to Medicare rates, and should Medicare reduce their rates, we may be negatively impacted. If we fail to establish broad adoption of and reimbursement for our molecular diagnostic tests, or if we are unable to maintain existing reimbursement from payors, our ability to generate revenue could be harmed and this could have a material adverse effect on our business, financial condition and results of operations.

**We may experience limits on our revenue if physicians decide not to order our molecular diagnostic tests.**

If we are unable to create or maintain demand for our molecular diagnostic tests in sufficient volume, we may not become profitable. To generate demand, we will need to continue to educate physicians and the medical community on the value and benefits of our molecular diagnostic tests in order to change clinical practices through published papers, presentations at scientific conferences and one-on-one education by our internal sales force. In addition, our ability to obtain and maintain adequate reimbursement from third-party payors will be critical to generating revenue.

In many cases, practice guidelines in the United States have recommended therapies or surgery to determine if a patient's condition is malignant or benign. Accordingly, physicians may be reluctant to order a diagnostic test that may suggest surgery is unnecessary. In addition, our molecular diagnostic tests are performed at our laboratories rather than by a pathologist in a local laboratory, so pathologists may be reluctant to support our molecular diagnostic tests. In addition, guidelines for the diagnosis and treatment may change to recommend another type of treatment protocol, and these changes may result in medical practitioners deciding not to use our molecular diagnostic tests. These facts may make physicians reluctant to convert to using our molecular diagnostic tests, which could limit our ability to generate revenue and achieve profitability, which could have a material adverse effect on our business, financial condition and results of operations.

**We may experience limits on our revenue if patients decide not to use our molecular diagnostic tests.**

Some patients may decide not to use our molecular diagnostic tests due to price, all or part of which may be payable directly by the patient if the patient's insurer denies reimbursement in full or in part. Many insurers seek to shift more of the cost of healthcare to patients in the form of higher co-payments or premiums. In addition, the current economic environment in the United States has and may continue to result in the loss of healthcare coverage. Implementation of provisions of PPACA (also known as the Affordable Care Act) also resulted in the loss of health insurance, and increases in premiums and reductions in coverage, for some patients. These events may result in patients delaying or forgoing medical checkups or treatment due to their inability to pay for our test, which could have an adverse effect on our revenue. In addition, the President of the United States has announced that he favors repealing PPACA in 2017, and leaders of the Republican-controlled federal legislature also have expressed a desire to repeal PPACA. The scope and timing of any legislation to repeal, amend, replace, or reform PPACA is uncertain, but if such legislation were to become law, it could have a significant impact on the U.S. healthcare system. We do have a Patient Assistance Program that allows eligible patients to apply for assistance in covering a portion of their out of pocket obligation; however, there is no guarantee that this Program will be sufficient to influence patients to use our molecular diagnostic tests.

**If our internal sales force is less successful than anticipated, our business expansion plans could suffer and our ability to generate revenues could be diminished. In addition, we have limited history selling our molecular diagnostics tests on a direct basis and our limited history makes forecasting difficult.**

If our internal sales force is not successful, or new additions to our sales team fail to gain traction among our customers, we may not be able to increase market awareness and sales of our molecular diagnostic tests. If we fail to establish our molecular diagnostic tests in the marketplace, it could have a negative effect on our ability to sell subsequent molecular diagnostic tests or other products or services and hinder the desired expansion of our business. We have growing, however limited, historical experience forecasting the direct sales of our molecular diagnostics products. Our ability to process quantities that meet customer demand is dependent upon our ability to forecast accurately and plan production accordingly.

**Due to how we recognize revenue, our quarterly operating results are likely to fluctuate.**

We recognize a significant portion of our revenue when the following four revenue recognition criteria are met: persuasive evidence of an arrangement exists; services have been rendered; the selling price is fixed or determinable; and collectability is reasonably assured. We have little visibility as to when we will receive payment, and we must appeal negative payment decisions, which delays collections. For molecular diagnostic tests performed where we have an agreed upon reimbursement rate or we are able to make a reasonable estimate of reimbursement at the time delivery is complete, such as in the case of Medicare and certain other payors, we recognize the related revenue upon delivery of a patient report to the prescribing physician based on the established billing rate less contractual and other adjustments to arrive at the net amount that we expect to collect. We determine the net amount we expect to collect based on a per payor, per contract or agreement basis. In situations where we are not able to make a reasonable estimate of reimbursement, we recognize revenue upon the earlier of receipt of third-party notification of payment or when cash is received. Upon ultimate collection, the amount received from Medicare and other payors where reimbursement was estimated is compared to previous estimates and the contractual allowance is adjusted accordingly. These factors will likely result in fluctuations in our quarterly revenue. Should we recognize revenue from payors on an accrual basis and later determine the judgments underlying estimated reimbursement change, or were incorrect at the time we accrued such revenue, our financial results could be negatively impacted in future quarters. As a result, comparing our operating results on a period-to-period basis may vary. You should not rely on our past results as an indication of our future performance. In addition, these fluctuations in revenue may make it difficult for us, research analysts and investors to accurately forecast our revenue and operating results. If our revenue or operating results fall below consensus expectations, the price of our common stock would likely decline.

**We rely on sole suppliers for some of the materials used in our molecular diagnostic tests, and we may not be able to find replacements or transition to alternative suppliers in a timely manner.**

We rely on sole suppliers for certain materials that we use to perform our molecular diagnostic tests, including Asuragen for our thyroid tests pursuant to our supply agreement with them. We also purchase reagents used in our molecular diagnostic tests from sole-source suppliers. While we have developed alternate sourcing strategies for these materials and vendors, we cannot be certain whether these strategies will be effective or the alternative sources will be available in a timely manner. If these suppliers can no longer provide us with the materials we need to perform our molecular diagnostic tests, if the materials do not meet our quality specifications, or if we cannot obtain acceptable substitute materials, an interruption in molecular diagnostic test processing could occur. Any such interruption may directly impact our revenue and cause us to incur higher costs.

**We may experience problems in scaling our operations, or delays or reagent and supply shortages that could limit the growth of our revenue.**

If we encounter difficulties in scaling our operations as a result of, among other things, quality control and quality assurance issues, availability of reagents and raw material supplies, or sufficient credit worthiness to acquire sufficient reagents and supplies, we will likely experience reduced sales of our molecular diagnostic tests, increased repair or re-engineering costs, and defects and increased expenses due to switching to alternate suppliers, any of which would reduce our revenues and gross margins.

Although we attempt to match our capabilities to estimates of marketplace demand, to the extent demand materially varies from our estimates, we may experience constraints in our operations and delivery capacity, which could adversely impact revenue in a given fiscal period. Should our need for raw materials and reagents used in our molecular diagnostic tests fluctuate, we could incur additional costs associated with either expediting or postponing delivery of those materials or reagents.

**If we are unable to support demand for our molecular diagnostic tests or any of our future tests or solutions, our business could suffer.**

As demand for our molecular diagnostic tests grows, we will need to continue to scale our testing capacity and processing technology, expand customer service, billing and systems processes and enhance our internal quality assurance program. We will also need additional certified laboratory scientists and other scientific and technical personnel to process higher volumes of our molecular diagnostic tests. We cannot assure you that increases in scale, related improvements and quality assurance will be implemented successfully or that appropriate personnel will be available. Failure to implement necessary procedures, transition to new processes or hire the necessary or appropriately trained personnel could result in higher costs of processing tests or inability to meet demand. There can be no assurance that we will be able to perform our testing on a timely basis at a level consistent with demand, or that our efforts to scale our operations will not negatively affect the quality of test results. If we encounter difficulty meeting market demand or quality standards, our reputation could be harmed and our future prospects and our business could suffer, causing a material adverse effect on our business, financial condition and results of operations.

**If we are unable to compete successfully, we may be unable to increase or sustain our revenue or achieve profitability.**

We compete with physicians and the medical community who may use less sophisticated methods to diagnose gastrointestinal and endocrine cancers. In many cases, practice guidelines in the United States have recommended therapies or surgery to determine if a patient's condition is malignant or benign. As a result, we believe that we will need to continue to educate physicians and the medical community on the value and benefits of our molecular diagnostic tests in order to continue to positively impact clinical practices. In addition, we face competition from other companies that offer diagnostic tests. Specifically, in regard to our thyroid diagnostic tests, Veracyte has thyroid nodule cancer diagnostic tests that compete with our ThyGenX<sup>®</sup> and ThyraMIR<sup>®</sup> tests, which are currently on the market, and Veracyte may be developing additional tests aimed at FNAs for thyroid cancer. Quest currently offers a diagnostic test similar to the earlier version of our ThyGenX<sup>®</sup> test, and CBL is offering a diagnostic test that analyzes genetic alterations using next-generation sequencing. Other competitors for our thyroid assays include Rosetta Genomics, Accelerate Diagnostics, Inc., Cancer Genetics, Inc., Genomic Health Inc., NeoGenomics Inc. and Trovagene, Inc. While we do not believe we currently have direct competition for PancreGEN<sup>®</sup> in the gastrointestinal market, there is the potential for indirect competition as well as direct competition due to the limited penetration we currently have of this market.

It is also possible that we face future competition from Laboratory Developed Tests ("LDTs") developed by commercial laboratories such as Quest and/or other diagnostic companies developing new molecular diagnostic tests or technologies. Furthermore, we may be subject to competition as a result of the new, unforeseen technologies that can be developed by our competitors in the gastrointestinal and endocrine cancer molecular diagnostic tests space.

To compete successfully, we must be able to demonstrate, among other things, that our test results are accurate and cost effective, and we must secure a meaningful level of reimbursement for our tests. Since our molecular diagnostics business began in 2014, many of our potential competitors have stronger brand recognition and greater financial capabilities than we do. Others may develop a test with a lower price than ours that could be viewed by physicians and payors as functionally equivalent to our molecular diagnostic tests, or offer a test at prices designed to promote market penetration, which could force us to lower the price of our molecular diagnostic tests and affect our ability to achieve and maintain profitability. If we are unable to compete successfully against current and future competitors, we may be unable to increase market acceptance of our molecular diagnostic tests and overall sales, which could prevent us from increasing our revenue or achieving profitability and cause the market price of our common stock to decline. As we add new molecular diagnostic tests and services, we will face many of these same competitive risks for these new tests and services.

**Developing new molecular diagnostic tests involves a lengthy and complex process, and we may not be able to commercialize on a timely basis, or at all, other molecular diagnostic tests we are developing.**

Developing new molecular diagnostic tests and solutions require us to devote considerable resources to research and development. We may face challenges obtaining sufficient numbers of samples to validate a newly acquired or developed molecular diagnostic test. In order to develop and commercialize new tests, we typically need to:

- expend significant funds to conduct substantial research and development;
- conduct successful analytical and clinical studies;
- scale our laboratory processes to accommodate new molecular diagnostic tests; and
- build the commercial infrastructure to market and sell new tests.

Typically, few research and development projects result in commercial products, and success in early clinical studies often is not replicated in later studies. At any point, we may abandon development of a test or we may be required to expend considerable resources repeating clinical studies, which would adversely affect the timing for generating revenue from such test. If a clinical validation study fails to demonstrate the prospectively defined endpoints of the study or if we fail to sufficiently demonstrate analytical validity, we might choose to abandon the development of the molecular diagnostic test, which could harm our business. In addition, competitors may develop and commercialize new competing tests faster than us or at a lower cost, which could have a material adverse effect on our business, financial condition and results of operations.

**Unfavorable results of legal proceedings could have a material adverse effect on our business, financial condition and results of operations.**

We are and may become subject to various legal proceedings and claims that arise in or outside the ordinary course of business. The results of legal proceedings cannot be predicted with certainty. Regardless of merit, litigation may be both time-consuming and disruptive to our operations and cause significant expense and diversion of management attention. If we do not prevail in the legal proceedings, we may be faced with significant monetary damages or injunctive relief against us that could have a material adverse effect on our business, financial condition and results of operations.

**If we are unable to develop or acquire molecular diagnostic tests to keep pace with rapid technological, medical and scientific change, our operating results and competitive position could be affected.**

Recently, there have been numerous advances in technologies relating to diagnostics, particularly diagnostics that are based on genomic information. These advances require us to continuously develop our technology and to work to develop new solutions to keep pace with evolving standards of care. Our solutions could become obsolete unless we continually innovate and expand our product offerings to include new clinical applications. If we are unable to develop or acquire new molecular diagnostic tests or to demonstrate the applicability of our molecular diagnostic tests for other diseases, our sales could decline and our competitive position could be harmed.

**If the U.S. Food and Drug Administration were to begin to enforce regulation of our molecular diagnostic tests, we could incur substantial costs and delays associated with trying to obtain pre-market clearance or approval and costs associated with complying with post-market requirements.**

Clinical laboratory tests like our molecular diagnostic tests are regulated under CLIA as well as by applicable State laws. Most LDTs are currently not subject to the FDA's, regulation (although reagents, instruments, software or components provided by third parties and used to perform LDTs may be subject to regulation). In October 2014, the FDA issued two draft guidance documents: "Framework for Regulatory Oversight of Laboratory Developed Tests", which provides an overview of how the FDA would regulate LDTs through a risk-based approach, and "FDA Notification and Medical Device Reporting for Laboratory Developed Tests", which provides guidance on how the FDA intends to collect information on existing LDTs, including adverse event reports. Pursuant to the Framework for Regulatory Oversight draft guidance, LDT manufacturers will be subject to medical device registration, listing, and adverse event reporting requirements. LDT manufacturers will be required to either submit a pre-market application and receive the FDA's approval before an LDT may be marketed or submit a pre-market notification in advance of marketing. The Framework for Regulatory Oversight draft guidance states that within six months after the guidance documents are finalized, all laboratories will be required to give notice to the FDA and provide basic information concerning the nature of the LDTs offered.

On November 18, 2016, however, the FDA announced that it would not release the final guidance at this time and instead would continue to work with stakeholders, the new administration and Congress to determine the right approach. On January 13, 2017, the FDA released a discussion paper on LDTs outlining a possible risk-based approach for FDA and CMS oversight of LDTs. According to the 2017 discussion paper, previously marketed LDTs would not be expected to comply with most or all FDA oversight requirements (grandfathering), except for adverse event and malfunction reporting. In addition, certain new and significantly modified LDTs would not be expected to comply with pre-market review unless the agency determines certain tests could lead to patient harm. Since LDTs currently on the market would be grandfathered in, pre-market review of new and significantly modified LDTs could be phased-in over a four year period, as opposed to the nine years proposed in the Framework for Regulatory Oversight draft guidance. In addition, tests introduced after the effective date, but before their phase-in date, could continue to be offered during pre-market review.

The discussion paper notes that FDA will focus on analytical and clinical validity as the basis for marketing authorization. The FDA anticipates laboratories that already conduct proper validation should not be expected to experience new costs for validating their tests to support marketing authorization and laboratories that conduct appropriate evaluations would not have to collect additional data to demonstrate analytical validity for FDA clearance or approval. The evidence of the analytical and clinical validity of all LDTs will be made publically available. LDTs are encouraged to submit prospective change protocols in their pre-market submission that outline specific types of anticipated changes, the procedures that will be followed to implement them and the criteria that will be met prior to implementation.



Despite the FDA decision not to release the guidance at this time, it can choose to release the guidance at any time in the future. If the guidance is released and pre-market review is required, our business could be negatively impacted as a result of commercial delay that may be caused by the new requirements. The cost of conducting clinical trials and otherwise developing data and information to support pre-market applications may be significant. If we are required to submit applications for our currently-marketed tests, we may be required to conduct additional studies, which may be time-consuming and costly and could result in our currently-marketed tests being withdrawn from the market. Continued compliance with the FDA's regulations would increase the cost of conducting our business, and subject us to heightened regulation by the FDA and penalties for failure to comply with these requirements. Failure to comply with applicable regulatory requirements can result in enforcement action by the FDA, such as fines, product suspensions, warning letters, recalls, injunctions and other civil and criminal sanctions. There are other regulatory and legislative proposals that would increase general FDA oversight of clinical laboratories and LDTs. The outcome and ultimate impact of such proposals on the business is difficult to predict at this time. We are monitoring developments and anticipate that our products will be able to comply with requirements that are ultimately imposed by the FDA. In the meantime, we maintain our CLIA accreditation, which permits the use of LDTs for diagnostics purposes.

**If we fail to comply with Federal, State and foreign laboratory licensing requirements, we could lose the ability to perform our tests or experience disruptions to our business.**

We are subject to CLIA, a Federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. CLIA regulations mandate specific standards in the areas of personnel qualifications, administration, and participation in proficiency testing, patient test management and quality assurance. CLIA certification is also required in order for us to be eligible to bill Federal and State healthcare programs, as well as many private third-party payors, for our molecular diagnostic tests. To renew these certifications, we are subject to survey and inspection every two years. Moreover, CLIA inspectors may make random inspections of our clinical reference laboratories. We are also required to maintain State licenses to conduct testing in our New Haven, Connecticut and Pittsburgh, Pennsylvania laboratories. Connecticut and Pennsylvania laws require that we maintain a license and establishes standards for the day-to-day operation of our clinical reference laboratory in New Haven, Connecticut and Pittsburgh, Pennsylvania. In addition, our Pittsburgh and New Haven laboratories are required to be licensed on a test-specific basis by California, Florida, Maryland, New York and Rhode Island. California, Florida, Maryland, New York and Rhode Island laws also mandate proficiency testing for laboratories licensed under the laws of each respective State regardless of whether such laboratories are located in California, Florida, Maryland, New York or Rhode Island. In 2016, we received final approval for our ThyGenX<sup>®</sup> and ThyraMIR<sup>®</sup> assays in New York State. If we were unable to obtain or lose our CLIA certificate for our laboratories, whether as a result of revocation, suspension or limitation, we would no longer be able to perform our molecular diagnostic tests, which could have a material adverse effect on our business, financial condition and results of operations. If we were to lose our licenses issued by New York or by other States where we are required to hold licenses, we would not be able to test specimens from those States. New molecular diagnostic tests we may develop may be subject to new approvals by governmental bodies such as New York State, and we may not be able to offer our new molecular diagnostic tests to patients in such jurisdictions until such approvals are received.

**Recent legislation reforming the U.S. healthcare system may have a material adverse effect on our financial condition and operations.**

PPACA makes changes that are expected to significantly impact the pharmaceutical, medical device and clinical laboratory industries. Beginning in 2013, each medical device manufacturer must pay a sales tax in an amount equal to 2.3% of the price for which such manufacturer sells its medical devices that are listed with the FDA. The FDA's final guidance on LDTs may require our molecular diagnostic tests to be regulated as medical devices. However, consistent with the FDA's policy of exercising enforcement discretion for LDTs, our molecular diagnostic tests are not currently listed as medical devices with the FDA. In December 2015, the Consolidated Appropriations Act was adopted, which included a two-year moratorium on the medical device excise tax. The moratorium will end on December 31, 2017, and we cannot assure that the tax will not be extended to services such as ours in the future if our tests were to be regulated as devices. However, in January 2017, Congress introduced the Medical Device Access and Innovation Protection Act, which could repeal the medical device tax.

Other significant measures contained in PPACA include, for example, coordination and promotion of research on comparative clinical effectiveness of different technologies and procedures, initiatives to revise Medicare payment methodologies, such as bundling of payments across the continuum of care by providers and physicians, and initiatives to promote quality indicators in payment methodologies. PPACA also includes significant new fraud and abuse measures, including required disclosures of financial arrangements with physician customers, lower thresholds for violations and increasing potential penalties for such violations. In addition, PPACA establishes an Independent Payment Advisory Board, or IPAB, to reduce the per capita rate of growth in Medicare spending. The IPAB has broad discretion to propose policies to reduce expenditures, which may have a negative effect on payment rates for services. The IPAB proposals may affect payments for clinical laboratory services beginning in 2016 and for hospital services beginning in 2020. We are monitoring the effect of PPACA to determine the trends and any potential changes that may be necessitated by the legislation, any of which may potentially affect our business.

Following the 2016 U.S. general election, a single party now leads the executive branch and holds majorities in both the U.S. Senate and House of Representatives. The President of the United States has announced that he favors repealing PPACA in 2017, and leaders of the Republican-controlled federal legislature also have expressed a desire to repeal PPACA. The scope and timing of any legislation to repeal, amend, replace, or reform PPACA is uncertain, but if such legislation were to become law, it could have a significant impact on the U.S. healthcare system.

On January 20, 2017, the new administration signed an executive order directing federal agencies to exercise existing authorities to reduce burdens associated with PPACA pending further action by Congress. On the same day, the White House issued a regulatory freeze memo under which rules and guidance published but not yet effective must be frozen for 60 days pending review; rules and guidance submitted for publication but not yet published must be withdrawn; and rules and guidance not yet submitted for publication must not be submitted without further direction from the Administration. Since then, further executive orders and statements from the White House and Congress have addressed potential regulatory changes that could affect us and our customers. Changes to, or repeal of, PPACA may continue to affect coverage, reimbursement, and utilization of laboratory services, as well as administrative requirements, in ways that are currently unpredictable.

In addition to PPACA, the effect of which cannot presently be fully quantified, various healthcare reform proposals have emerged from Federal and State governments. For example, in February 2012, Congress passed the Middle Class Tax Relief and Job Creation Act of 2012, which reduced the clinical laboratory payment rates on the Medicare CLFS by 2% in 2013. In addition, a further reduction of 2% was implemented under the Budget Control Act of 2011, which is to be in effect for dates of service on or after April 1, 2013 until fiscal year 2024. Reductions resulting from the Congressional sequester are applied to total claim payments made; however, they do not currently result in a rebasing of the negotiated or established Medicare or Medicaid reimbursement rates.

State legislation on reimbursement applies to Medicaid reimbursement and Managed Medicaid reimbursement rates within that State. Some States have passed or proposed legislation that would revise reimbursement methodology for clinical laboratory payment rates under those Medicaid programs. 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 any future legislation or regulation will have on us. The taxes imposed by Federal legislation, cost reduction measures and the expansion in the role of the U.S. government in the healthcare industry may result in decreased revenue, lower reimbursement by payors for our tests or reduced medical procedure volumes, all of which may adversely affect our business, financial condition and results of operations.

Ongoing calls for deficit reduction at the Federal government level and reforms to programs such as the Medicare program to pay for such reductions may affect the pharmaceutical, medical device and clinical laboratory industries. In particular, recommendations by the Simpson-Bowles Commission called for the combination of Medicare Part A (hospital insurance) and Part B (physician and ancillary service insurance) into a single co-insurance and co-payment structure. Currently, clinical laboratory services are excluded from the Medicare Part B co-insurance and co-payment as preventative services. Combining Parts A and B may require clinical laboratories to collect co-payments from patients, which may increase our costs and reduce the amount ultimately collected.

In 2013, CMS announced plans to bundle payments for clinical laboratory tests together with other services performed during hospital outpatient visits under the Hospital Outpatient Prospective Payment System. CMS exempted molecular diagnostic tests from this packaging provision at that time. It is possible that this exemption could be removed by CMS in future rule making, which might result in lower reimbursement for tests performed in this setting.

In April 2014, the President signed PAMA, which included a substantial new payment system for clinical laboratory tests under the CLFS. PAMA removed CMS's authority to adjust the CLFS based and established a new method for setting CLFS rates. Implementation of this new method for setting CLFS rates began in 2016. Under PAMA, laboratories that have more than \$12,500 in Medicare revenues from laboratory services and that receive more than 50 percent of their Medicare revenues from laboratory services would report private payor data from January 1, 2016 through June 30, 2016, to CMS between January 1, 2017 and March 31, 2017. CMS will post the new Medicare CLFS rates (based on weighted median private payor rates) in November 2016 and the new rates will be effective beginning on January 1, 2018. Any reductions to payment rates resulting from the new methodology are limited to 10% per test per year in each of the years 2017 through 2019 and to 15% per test per year in each of the years 2020 through 2022. CMS has issued draft regulations regarding these changes. Further rule-making from CMS will define the time period and data elements evaluated on an annual basis to set reimbursement rates for tests like ours.

**Complying with numerous statutes and regulations pertaining to our molecular diagnostics business is an expensive and time-consuming process, and any failure to comply could result in substantial penalties.**

We are subject to regulation by both the Federal government and the States in which we conduct our molecular diagnostics business, including:

- The Food, Drug and Cosmetic Act, as supplemented by various other statutes;
- The Prescription Drug Marketing Act of 1987, the amendments thereto, and the regulations promulgated thereunder and contained in 21 C.F.R. Parts 203 and 205;
- CLIA and State licensing requirements;
- Manufacturing and promotion laws;
- Medicare billing and payment regulations applicable to clinical laboratories;
- The Federal Anti-Kickback Statute, which prohibits knowingly and willfully offering, paying, soliciting, or receiving remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual, or the furnishing, arranging for, or recommending of an item or service that is reimbursable, in whole or in part, by a Federal healthcare program;
- The Federal Stark physician self-referral law (and state equivalents), which prohibits a physician from making a referral for certain designated health services covered by the Medicare program, including laboratory and pathology services, if the physician or an immediate family member has a financial relationship with the entity providing the designated health services, unless the financial relationship falls within an applicable exception to the prohibition;
- HIPAA, which established comprehensive federal standards with respect to the privacy and security of protected health information and requirements for the use of certain standardized electronic transactions, and amendments made in 2013 to HIPAA under the Health Information Technology for Economic and Clinical Health Act, which strengthen and expand HIPAA privacy and security compliance requirements, increase penalties for violators, extend enforcement authority to state attorneys general, and impose requirements for breach notification;

- The Federal Civil Monetary Penalties Law, which prohibits, among other things, the offering or transfer of remuneration to a Medicare or state healthcare program beneficiary if the person knows or should know it is likely to influence the beneficiary's selection of a particular provider, practitioner, or supplier of services reimbursable by Medicare or a state healthcare program, unless an exception applies;
- 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 to the federal government;
- Other Federal and State fraud and abuse laws, prohibitions on self-referral, fee-splitting restrictions, prohibitions on the provision of products at no or discounted cost to induce physician or patient adoption, and false claims acts, which may extend to services reimbursable by any third-party payor, including private insurers;
- The prohibition on reassignment of Medicare claims, which, subject to certain exceptions, precludes the reassignment of Medicare claims to any other party;
- The rules regarding billing for diagnostic tests reimbursable by the Medicare program, which prohibit a physician or other supplier from marking up the price of the technical component or professional component of a diagnostic test ordered by the physician or other supplier and supervised or performed by a physician who does not "share a practice" with the billing physician or supplier; and
- State laws that prohibit other specified practices related to billing such as billing physicians for testing that they order, waiving coinsurance, co-payments, deductibles, and other amounts owed by patients, and billing a State Medicaid program at a price that is higher than what is charged to other payors.

We have implemented policies and procedures designed to comply with these laws and regulations. We periodically conduct internal reviews of our compliance with these laws. Our compliance is also subject to governmental review. The growth of our business may increase the potential of violating these laws, regulations or our internal policies and procedures. The risk of our being found in violation of these or other laws and regulations is further increased by the fact that many have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Violations of Federal or State regulations may incur investigation or enforcement action by the FDA, Department of Justice, State agencies, or other legal authorities, and may result in substantial civil, criminal, or other sanctions. Any action brought against us for violation of these or other laws or regulations, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. If our operations are found to be in violation of any of these laws and regulations, we may be subject to civil and criminal penalties, damages and fines, we could be required to refund payments received by us, we could face possible exclusion from Medicare, Medicaid and other Federal or State healthcare programs and we could even be required to cease our operations. Any of the foregoing consequences could have a material adverse effect on our business, financial condition and results of operations.

**A failure to comply with Federal and State laws and regulations pertaining to our payment practices could result in substantial penalties.**

We retain healthcare practitioners as key opinion leaders providing consultation in various aspects of our business. These arrangements, like any arrangement that includes compensation to a healthcare provider, may trigger Federal or State anti-kickback and Stark Law liability. Our arrangements are designed to meet available safe harbors and exceptions provided in the anti-kickback laws and Stark Laws, respectively. However, there are no guarantees that the Federal or State governments will find that these arrangements are designed properly or that they do not trigger liability under Federal and State laws. Under existing laws, all arrangements must have a legitimate purpose and compensation must be fair market value. These terms require some subjective analysis and there is limited available case law or guidance for the application of these laws to the CLIA laboratory industry. Safe harbors in the anti-kickback laws do not necessarily equate to exceptions in the Stark Law, and there is no guarantee that the government will agree with our payment practices with respect to the relationships between our laboratories and the healthcare providers. A failure to comply with Federal and State laws and regulations pertaining to our payment practices could result in substantial penalties and adversely affect our business, financial condition and results of operations.

**If we use hazardous materials in a manner that causes contamination or injury, we could be liable for resulting damages.**

We are subject to Federal, State and local laws, rules and regulations governing the use, discharge, storage, handling and disposal of biological material, chemicals and waste. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, remediation costs and any related penalties or fines, and any liability could exceed our resources or any applicable insurance coverage we may have. The cost of compliance with these laws and regulations may become significant, and our failure to comply may result in substantial fines or other consequences, and either could have a significant impact on our operating results.

**Security breaches, loss of data and other disruptions to us or our third-party service providers could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.**

Our business requires that we and our third-party service providers collect and store sensitive data, including legally protected health information, personally identifiable information about patients, credit card information, and our proprietary business and financial information. We face a number of risks relative to our protection of, and our service providers' protection of, this critical information, including loss of access, inappropriate disclosure and inappropriate access, as well as risks associated with our ability to identify and audit such events. The secure processing, storage, maintenance and transmission of this critical information are vital to our operations and business strategy, and we devote significant resources to protecting such information. Although we take measures to protect sensitive information from unauthorized access or disclosure, our information technology and infrastructure may be vulnerable to attacks by hackers or viruses or otherwise breached due to employee error, malfeasance or other activities. While we have not experienced any such attack or breach, if such event would occur and cause interruptions in our operations, our networks would be compromised and the information we store on those networks could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Unauthorized access, loss or dissemination could disrupt our operations, including our ability to process tests, provide test results, bill payors or patients, process claims, provide customer assistance services, conduct research and development activities, collect, process and prepare company financial information, provide information about our solution and other patient and physician education and outreach efforts through our website, manage the administrative aspects of our business and damage our reputation, any of which could adversely affect our business. In addition, the interpretation and application of consumer, health-related and data protection laws in the United States are often uncertain, contradictory and in flux. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices, systems and compliance procedures in a manner adverse to our business.

**If we are sued for product liability or errors and omissions liability, we could face substantial liabilities that exceed our resources.**

The marketing, sale and use of our molecular diagnostic tests could lead to product liability claims if someone were to allege that the molecular diagnostic test failed to perform as it was designed. We may also be subject to liability for errors in the results we provide to physicians or for a misunderstanding of, or inappropriate reliance upon, the information we provide. A product liability or errors and omissions liability claim could result in substantial damages and be costly and time consuming for us to defend. Although we maintain product liability and errors and omissions insurance, we cannot be certain that our insurance would fully protect us from the financial impact of defending against these types of claims or any judgments, fines or settlement costs arising out of such claims. Any product liability or errors and omissions liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any product liability lawsuit could cause injury to our reputation or cause us to suspend sales of our products and solutions. The occurrence of any of these events could have a material adverse effect on our business, financial condition and results of operations.

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

We are a small company with approximately 63 employees. Future growth will impose significant added responsibilities on members of management, including the need to identify, attract, retain, motivate and integrate highly skilled personnel. We may increase the number of employees in the future depending on the progress and growth of our business. Our future financial performance and our ability to sell our existing molecular diagnostic tests and develop and commercialize new molecular diagnostic tests and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we must be able to:

- manage our clinical studies effectively;
- integrate additional management, administrative, laboratory and regulatory personnel;
- maintain sufficient administrative, accounting management and laboratory information systems and internal accounting controls; and
- hire and train additional qualified personnel.

We may not be able to accomplish these tasks, and our failure to accomplish any of them could harm our financial results. We may need to reduce the size of our organization in order to become profitable and we may experience difficulties in managing these reductions.

**Billing for our diagnostic tests is complex, and we must dedicate substantial time and resources to the billing process to be paid for our molecular diagnostic tests.**

Billing for clinical laboratory testing services is complex, time consuming and expensive. Depending on the billing arrangement and applicable law, we bill various payors, including Medicare, insurance companies and patients, all of which have different billing requirements. To the extent laws or contracts require us to bill patient co-payments or co-insurance, we must also comply with these requirements. We may also face increased risk in our collection efforts, including write-offs of doubtful accounts and long collection cycles, which could have a material adverse effect on our business, results of operations and financial condition. Among others, the following factors make the billing process complex:

- differences between the list price for our molecular diagnostic tests and the reimbursement rates of payors;
- compliance with complex Federal and State regulations related to billing Medicare;
- disputes among payors as to which party is responsible for payment;
- differences in coverage among payors and the effect of patient co-payments or co-insurance;
- differences in information and billing requirements among payors;
- incorrect or missing billing information; and
- the resources required to manage the billing and claims appeals process.

As we grow and introduce new tests, we will need to add new codes to our billing process as well as our financial reporting systems. Failure or delays in effecting these changes in external billing and internal systems and processes could negatively affect our revenue and cash flow. Additionally, our billing activities require us to implement compliance procedures and oversight, train and monitor our employees or contractors, challenge coverage and payment denials, assist patients in appealing claims, and undertake internal audits to evaluate compliance with applicable laws and regulations as well as internal compliance policies and procedures. Payors also conduct external audits to evaluate payments, which add further complexity to the billing process. These billing complexities, and the related uncertainty in obtaining payment for our diagnostic solution, could negatively affect our revenue and cash flow, our ability to achieve profitability, and the consistency and comparability of our results of operations.



**We rely on a third- party to process and transmit claims to payors, and any delay in either could have an adverse effect on our revenue.**

We rely on Quadax, Inc., a third-party provider to provide overall processing of claims and to transmit the actual claims to payors based on the specific payor billing format. If claims for our molecular diagnostic tests are not submitted to payors on a timely basis, or if we are required to switch to a different provider to handle claim submissions, we may experience delays in our ability to process these claims and receipt of payments from payors, which could have a material adverse effect on our business, financial condition and results of operations.

**Enacted healthcare reform legislation may increase our costs, impair our ability to adjust our pricing to match any such increased costs, and therefore could materially and adversely affect our business, financial condition and results of operations.**

PPACA entails sweeping healthcare reforms with staggered effective dates from 2010 through 2018, although certain of these effective dates have been delayed by action of the current administration. While some guidance has been issued under PPACA over the past several years, many provisions in PPACA require the issuance of additional guidance from the U.S. Department of Labor, the Internal Revenue Service, the U.S. Department of Health & Human Services, and State governments. This reform includes, but is not limited to: the implementation of a small business tax credit; required changes in the design of our healthcare policy including providing insurance coverage to part-time workers working on average thirty (30) or more hours per week; “grandfathering” provisions for existing policies; “pay or play” requirements; a “Cadillac plan” excise tax; and specifically required “essential benefits,” that must be included in “qualified plans,” which benefits include coverage for laboratory tests.

Effective January 1, 2014, each State was required to participate in the PPACA marketplace and make health insurance coverage available for purchase by eligible individuals through a website. While these websites were subject to significant administrative issues leading up to their inception dates (and, in some cases, thereafter), it is currently estimated that in excess of 11 million individuals nationwide had enrolled in health insurance coverage through these exchanges as of the end of 2015. It is unclear, however, how many of these individuals are becoming insured after previously not having health insurance coverage, versus maintaining their plans purchased on the exchanges in 2014 or switching from other health insurance plans.

PPACA also requires “Applicable Manufacturers” to disclose to the Secretary of the Department of Health & Human Services drug sample distributions and certain payments or transfers of value to covered recipients (physicians and teaching hospitals) on an annual basis. “Applicable Manufacturers” and “Applicable Group Purchasing Organizations” must also disclose certain physician ownership or investment interests. The data submitted will ultimately be made available on a public website. Based upon the structure of our relationship with our clients, we may be included in the definition of “Applicable Manufacturer” for purposes of the disclosure requirements or may provide services that include the transfer of drug samples and/or other items of value to covered recipients. As such, we may be required to disclose or provide information that is subject to disclosure. There may be certain risks and penalties associated with the failure to properly make such disclosures, including but not limited to the specific civil liabilities set forth in PPACA, which allows for a maximum civil monetary penalty per “Applicable Manufacturer” of \$1,150,000 per year. There may be additional risks and claims made by third parties derived from an improper disclosure that are difficult to ascertain at this time.

In June 2012, the United States Supreme Court upheld the constitutionality of key provisions of PPACA. PPACA contains numerous other initiatives that impact the pharmaceutical industry. These include, among other things:

- increasing existing price rebates in Federally funded healthcare programs;
- expanding rebates, or other pharmaceutical company discounts, into new programs;
- imposing a new non-deductible excise tax on sales of certain prescription pharmaceutical products by prescription drug manufacturers and importers;
- increasing requirements on employer-sponsored health insurance plans, generally, and imposing taxes on certain high-cost employer-sponsored plans;
- creating an independent commission to propose changes to Medicare with a particular focus on the cost of biopharmaceuticals in Medicare Part D; and
- increasing oversight by the FDA of pharmaceutical research and development processes and commercialization activities.

While PPACA may increase the number of patients who have insurance coverage, its cost containment measures could also adversely affect reimbursement for any of our molecular diagnostic tests. Cost control initiatives also could decrease the price that we receive for any molecular diagnostic tests we may develop in the future. If our molecular diagnostic tests are not considered cost-effective or if we are unable to generate adequate third-party reimbursement for the users of our molecular diagnostic tests, then we may be unable to maintain revenue streams sufficient to realize our targeted return on investment for our molecular diagnostic tests.

We are currently unable to determine the long-term, direct or indirect impact of such legislation on our business. Since the effect of many of the provisions of PPACA may not be determinable for a number of years, we do not expect PPACA to have a material adverse impact on our near term results of operations. However, healthcare reform as mandated and implemented under PPACA and any future Federal or State mandated healthcare reform could materially and adversely affect our business, financial condition and operations by increasing our operating costs, including our costs of providing health insurance to our employees, decreasing our revenue, impeding our ability to attract and retain customers, requiring changes to our business model, or causing us to lose certain current competitive advantages.

However, following the 2016 U.S. general election, a single party now leads the executive branch and holds majorities in both the U.S. Senate and House of Representatives. The President of the United States has announced that he favors repealing PPACA in 2017, and leaders of the Republican-controlled federal legislature also have expressed a desire to repeal PPACA. The scope and timing of any legislation to repeal, amend, replace, or reform PPACA is uncertain, but if such legislation were to become law, it could have a significant impact on the U.S. healthcare system.

On January 20, 2017, the new administration signed an executive order directing federal agencies to exercise existing authorities to reduce burdens associated with PPACA pending further action by Congress. On the same day, the White House issued a regulatory freeze memo under which rules and guidance published but not yet effective must be frozen for 60 days pending review; rules and guidance submitted for publication but not yet published must be withdrawn; and rules and guidance not yet submitted for publication must not be submitted without further direction from the Administration. Since then, further executive orders and statements from the White House and Congress have addressed potential regulatory changes that could affect us and our customers. Changes to, or repeal of, PPACA may continue to affect coverage, reimbursement, and utilization of laboratory services, as well as administrative requirements, in ways that are currently unpredictable.

**Changes in governmental regulation could negatively impact our business operations and increase our costs.**

The pharmaceutical, biotechnology and healthcare industries are subject to a high degree of governmental regulation. Significant changes in these regulations affecting our business could result in the imposition of additional restrictions on our business, additional costs to us in providing our molecular diagnostic tests to our customers or otherwise negatively impact our business operations. Changes in governmental regulations mandating price controls and limitations on patient access to our products could also reduce, eliminate or otherwise negatively impact our sales.

**If we do not increase our revenues and successfully manage the size of our operations, our business, financial condition and results of operations could be materially and adversely affected.**

The majority of our operating expenses are personnel-related costs such as employee compensation and benefits, reagents and disposable supplies as well as the cost of infrastructure to support our operations, including facility space and equipment. We continuously review our personnel to determine whether we are fully utilizing their services. If we believe we are not in a position to fully utilize our personnel, we may make further reductions to our workforce. If we are unable to achieve revenue growth in the future or fail to adjust our cost infrastructure to the appropriate level to support our revenues, our business, financial condition and results of operations could be materially and adversely affected.

**We may acquire businesses or assets or make investments in other companies or molecular diagnostic technologies that could harm our operating results, dilute our stockholders' ownership, increase our debt or cause us to incur significant expense.**

As part of our strategy, we may pursue acquisitions of synergistic businesses or molecular diagnostic assets. If we make any further acquisitions, we may not be able to integrate these acquisitions successfully into our existing business, and we could assume unknown or contingent liabilities. Any future acquisition by us also could result in significant write-offs or the incurrence of debt and contingent liabilities, any of which could harm our operating results and financial condition. Integration of an acquired company or business will also likely require management resources that otherwise would be available for ongoing development of our existing business. We may not identify or complete these transactions in a timely manner, on a cost-effective basis, or at all, and we may not realize the anticipated benefits of any acquisition. To finance any acquisitions or investments, we may choose to issue shares of our common stock as consideration, which would dilute the ownership of our stockholders. If the price of our common stock is low or volatile, we may not be able to acquire other companies for stock. Alternatively, it may be necessary for us to raise additional funds for these activities through public or private financings. Additional funds may not be available on terms that are favorable to us, or at all. If these funds are raised through the sale of equity or convertible debt securities, dilution to our stockholders could result. Consummating an acquisition poses a number of risks including:

- we may not be able to accurately estimate the financial impact of an acquisition on our overall business;
- an acquisition may require us to incur debt or other obligations, incur large and immediate write-offs, issue capital stock potentially dilutive to our stockholders or spend significant cash, or may negatively affect our operating results and financial condition;
- if we spend significant funds or incur additional debt or other obligations, our ability to obtain financing for working capital or other purposes could decline;
- worse than expected performance of an acquired business may result in the impairment of intangible assets;
- we may be unable to realize the anticipated benefits and synergies from acquisitions as a result of inherent risks and uncertainties, including difficulties integrating acquired businesses or retaining key personnel, partners, customers or other key relationships, and risks that acquired entities may not operate profitably or that acquisitions may not result in improved operating performance;
- we may fail to successfully manage relationships with customers, distributors and suppliers;
- our customers may not accept new molecular diagnostic tests from our acquired businesses;
- we may fail to effectively coordinate sales and marketing efforts of our acquired businesses;
- we may fail to combine product offerings and product lines of our acquired businesses timely and efficiently;
- an acquisition may involve unexpected costs or liabilities, including as a result of pending and future shareholder lawsuits relating to acquisitions or exercise by stockholders of their statutory appraisal rights, or the effects of purchase accounting may be different from our expectations;
- an acquisition may involve significant contingent payments that may adversely affect our future liquidity or capital resources;
- accounting for contingent payments requires significant judgment and changes to the assumptions used in determining the fair value of our contingent payments could lead to significant volatility in earnings;
- acquisitions and subsequent integration of these companies may disrupt our business and distract our management from other responsibilities; and
- the costs of an unsuccessful acquisition may adversely affect our financial performance.

Additional risks of integration of an acquired business include:

- differing information technology, internal control, financial reporting and record-keeping systems;
- differences in accounting policies and procedures;
- unanticipated additional transaction and integration-related costs;
- facilities or operations of acquired businesses in remote locations and the inherent risks of operating in unfamiliar legal and regulatory environments; and
- new products, including the risk that any underlying intellectual property associated with such products may not have been adequately protected or that such products may infringe on the proprietary rights of others.

**If our information technology and communications systems fail or we experience a significant interruption in their operation, our reputation, business and results of operations could be materially and adversely affected.**

The efficient operation of our business is dependent on our information technology and communications systems. Increasingly, we are also dependent upon our ability to electronically interface with our customers. The failure of these systems to operate as anticipated could disrupt our business and result in decreased revenue and increased overhead costs. In addition, we do not have complete redundancy for all of our systems and our disaster recovery planning cannot account for all eventualities. Our information technology and communications systems, including the information technology systems and services that are maintained by third party vendors, are vulnerable to damage or interruption from natural disasters, fire, terrorist attacks, malicious attacks by computer viruses or hackers, power loss or failure of computer systems, Internet, telecommunications or data networks. If these systems or services become unavailable or suffer a security breach, we may expend significant resources to address these problems, and our reputation, business and results of operations could be materially and adversely affected.

**We have and may continue to experience goodwill and other intangible asset impairment charges.**

We are required to evaluate goodwill and the carrying value of intangibles at least annually, and between annual tests if events or circumstances warrant such a test. As of December 31, 2016 and March 31, 2017 a substantial portion of our total assets are comprised of goodwill and other intangible assets. For the year ended December 31, 2015, we recorded a goodwill impairment charge of \$15.7 million pertaining to the acquisition of RedPath in October 2014 and during the third quarter of 2016, we recorded an impairment charge of \$3.4 million related to changes in our development strategy for products acquired from Asuragen.

We review the recoverability of long-lived assets and finite-lived intangible assets whenever events or changes in circumstances indicate that the carrying value of such assets may not be recoverable. If the sum of the expected future undiscounted cash flows is less than the carrying amount of the asset, an impairment loss is recognized by reducing the recorded value of the asset to its fair value measured by future discounted cash flows. This analysis requires estimates of the amount and timing of projected cash flows and, where applicable, judgments associated with, among other factors, the appropriate discount rate. Such estimates are critical in determining whether any impairment charge should be recorded and the amount of such charge if an impairment loss is deemed to be necessary. During the fourth quarter of 2016, we reviewed the recoverability of long-lived assets and finite-lived intangible assets and concluded that no further finite-lived intangible assets were impaired.

## **RISKS RELATING TO THE ASSET SALE**

**We may not be able to fund the remaining obligations of our previously sold CSO business, which could have a material adverse effect on our business and results of operations.**

In December 2015, we sold a majority of our CSO business to Publicis Healthcare Solutions, Inc., or Publicis, pursuant to an Asset Purchase Agreement, dated as of October 30, 2015, by and between us and Publicis, or the Asset Purchase Agreement, for a total cash payment of \$28.5 million, or the Asset Sale, including an initial upfront cash payment of \$25.5 million and \$3.0 million of a working capital adjustment. We used a significant portion of the net proceeds received at the closing of the Asset Sale to pay the balance of the outstanding loan under the Credit Agreement, dated October 31, 2014, by and among us, SWK Funding LLC and the financial institutions party thereto from time to time as lenders, and related fees. As a result of the Asset Sale, not all of our CSO obligations were assumed by Publicis. These obligations consist of accounts payable, costs relating to the closeout of the portion of the CSO business that principally related to the provision of services for multiple non-competing brands for different clients, or the ERT Unit, which Publicis did not acquire in the Asset Sale, and termination of various vendor contracts that had been associated with the CSO business. As such, we continue to negotiate terms and pay some of these obligations, but may not be able to satisfy all of these remaining obligations. If we are unable to satisfy all our remaining CSO obligations, our business and results of operations could be materially and adversely affected. As of May 1, 2017, our current remaining CSO obligations were upto \$2.5 million, in aggregate.

**The Asset Purchase Agreement exposes us to contingent liabilities that could have a material adverse effect on our financial condition.**

We have agreed to indemnify Publicis for damages resulting from or arising out of any inaccuracy or breach of any representation, warranty or covenant of ours in the Asset Purchase Agreement against any and all liabilities of ours not assumed by Publicis in the Asset Sale and for certain other matters. Significant indemnification claims by Publicis could have a material adverse effect on our financial condition. We will not be obligated to indemnify Publicis for any breach of certain of the representations and warranties by us under the Asset Purchase Agreement until the aggregate amount of claims for indemnification exceed \$250,000. In the event that claims for indemnification exceed this threshold, we will be obligated to indemnify Publicis for any damages or loss resulting from such breach up to 25% of the total purchase price paid or due and payable by Publicis to us. Claims for indemnification for breaches of covenants made by us under the Asset Purchase Agreement and for breaches of representations and warranties classified as fundamental representations or any provision of the Asset Purchase Agreement relating to taxes will not be subject to the deductible or aggregate liability cap described above. The Asset Purchase Agreement also allows Publicis to withhold monies due against an earn-out payment if indemnification claims are asserted. In addition, under the Asset Purchase Agreement, we will retain all of our debts and liabilities not assumed by Publicis.

## **RISKS RELATING TO OUR INTELLECTUAL PROPERTY**

**If we breach the Asuragen License Agreement or the CPRIT License Agreement, it could have a material adverse effect on our sales and commercialization efforts for miR *Inform*® thyroid and pancreas cancer diagnostic tests and other tests in development for thyroid cancer, and the sale of diagnostic devices and the performance of certain services relating to thyroid cancer.**

We currently license certain patents and know-how from Asuragen relating to (i) miR *Inform*® thyroid and pancreas cancer diagnostic tests and other tests in development for thyroid cancer, or the Asuragen License Agreement, and (ii) the sale of diagnostic devices and the performance of certain services relating to thyroid cancer, or the CPRIT License Agreement. Under the Asuragen License Agreement, we are obligated to pay royalties on the future net sales of the miR *Inform*® pancreas platform for a period of ten years following a qualifying sale, on the future net sales of the miR *Inform*® thyroid platform through August 13, 2024 and on certain other thyroid diagnostics tests for a period of ten years following a qualifying sale. Under the CPRIT License Agreement, we are obligated to pay 5% of net sales on sales of diagnostic devices and the performance of services relating to thyroid cancer, subject to a maximum deduction of 1.5% for royalties paid to third parties. Both of the Asuragen License Agreement and the CPRIT License Agreement continue until terminated by (i) mutual agreement of the parties or (ii) either party in the event of a material breach of the respective agreement by the other party. If we materially breach or fail to perform any provision under the CPRIT License Agreement, Asuragen will have the right to terminate our license, and upon the effective date of such termination, our right to practice the licensed patent rights would end. To the extent such licensed patent rights relate to our molecular diagnostic tests currently on the market, we would expect to exercise all rights and remedies available to us, including attempting to cure any breach by us, and otherwise seek to preserve our rights under the patent rights and other technology licensed to us, but we may not be able to do so in a timely manner, at an acceptable cost to us or at all. Any uncured, material breach under these license agreements could result in our loss of rights to practice the patent rights licensed to us under these license agreements, and to the extent such patent rights and other technology relate to our molecular diagnostic tests currently on the market, it could have a material adverse effect on our sales and commercialization efforts for miR *Inform*® thyroid and pancreas cancer molecular diagnostic tests and other tests in development for thyroid cancer, and the sale of molecular diagnostic tests and the performance of certain services relating to thyroid cancer.

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

We rely on patent protection as well as trademark, trade secret and other intellectual property rights protection and contractual restrictions to protect our proprietary technology. 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. While we apply for patents covering our products and technologies and uses thereof, we may fail to apply for patents on important products and technologies in a timely fashion or at all, or we may fail to apply for patents in relevant jurisdictions. Others could seek to design around our current or future patented technologies. We may not be successful in defending any challenges made against our patents or patent applications. Any successful third-party challenge to our patents could result in the unenforceability or invalidity of such patents and increased competition to our business. The outcome of patent litigation can be uncertain and any attempt by us to enforce our patent rights against others may not be successful, or, if successful, may take substantial time and result in substantial cost, and may divert our efforts and attention from other aspects of our business.

Monitoring unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate. If we were to enforce a claim that a third-party had illegally obtained and was using our trade secrets, it would be expensive and time consuming, and the outcome would be unpredictable. Further, competitors could willfully infringe our intellectual property rights, design around our protected technology or develop their own competitive technologies that arguably fall outside of our intellectual property rights. Others may independently develop similar or alternative products and technologies or replicate any of our products and technologies. If our intellectual property does not adequately protect us against competitors' products and methods, our competitive position could be adversely affected, as could our business and the results of our operations. To the extent our intellectual property offers inadequate protection, or is found to be invalid or unenforceable, we would be exposed to a greater risk of competition. If our intellectual property does not provide adequate coverage of our competitors' products, our competitive position could be adversely affected, as could our overall business. Both the patent application process and the process of managing patent disputes can be time consuming and expensive.

**Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our molecular diagnostic tests.**

As is the case with other molecular diagnostics companies, our success is heavily dependent on intellectual property, particularly on obtaining and enforcing patents. Obtaining and enforcing patents of molecular diagnostics tests, like our molecular diagnostic tests in our PancreGEN® and miR Inform® platforms, involves both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. From time-to-time the U.S. Supreme Court, other Federal courts, the U.S. Congress or the United States Patent and Trademark Office, or the USPTO, may change the standards of patentability and any such changes could have a negative impact on our business. For instance, on October 30, 2008, the Court of Appeals for the Federal Circuit issued a decision that methods or processes cannot be patented unless they are tied to a machine or involve a physical transformation. The U.S. Supreme Court later reversed that decision in *Bilski v. Kappos*, finding that the "machine-or-transformation" test is not the only test for determining patent eligibility. The Court, however, declined to specify how and when processes are patentable. On March 30, 2012, in the case *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, the U.S. Supreme Court reversed the Federal Circuit's application of *Bilski* and invalidated a patent focused on a process for identifying a proper dosage for an existing therapeutic because the patent claim embodied a law of nature. On July 30, 2012, the USPTO released a memorandum entitled "2012 Interim Procedure for Subject Matter Eligibility Analysis of Process Claims Involving Laws of Nature," with guidelines for determining patentability of diagnostic or other processes in line with the *Mayo* decision. On June 13, 2013, in *Association for Molecular Pathology v. Myriad Genetics*, the Supreme Court held that a naturally occurring DNA segment is a product of nature and not patent eligible merely because it has been isolated. The Supreme Court did not address the patentability of any innovative method claims involving the manipulation of isolated genes. On March 4, 2014, the USPTO released a memorandum entitled "2014 Procedure For Subject Matter Eligibility Analysis Of Claims Reciting Or Involving Laws Of Nature/Natural Principles, Natural Phenomena, And/Or Natural Products." This memorandum provides guidelines for the USPTO's new examination procedure for subject matter eligibility under 35 U.S.C. §101 for claims embracing natural products or natural principles. On June 12, 2015, the Federal Circuit issued a decision in *Ariosa v. Sequenom* holding that a method for detecting a paternally inherited nucleic acid of fetal origin performed on a maternal serum or plasma sample from a pregnant female were unpatentable as directed to a naturally occurring phenomenon. On July 30, 2015, the USPTO released a Federal Register Notice entitled, "July 2015 Update on Subject Matter Eligibility." This Notice updated the USPTO guidelines for the USPTO's procedure for subject matter eligibility under 35 U.S.C. §101 for claims embracing natural products or natural principles phenomenon. On May 4, 2016, the USPTO released life science examples that were intended to be used in conjunction with the USPTO guidance on subject matter eligibility. Although the guidelines and examples do not have the force of law, patent examiners have been instructed to follow them. What constitutes a law of nature and a sufficient inventive concept remains uncertain, and it is possible that certain aspects of molecular diagnostics tests would be considered natural laws and, therefore, ineligible for patent protection. Some aspects of our technology involve processes that may be subject to this evolving standard and we cannot guarantee that any of our pending or issued claims will be patentable or upheld as valid as a result of such evolving standards. In addition, patents we own or license that issued before these recent cases may be subject to challenge in court or before the USPTO in view of these current legal standards. Accordingly, the evolving interpretation and application of patent laws in the United States governing the eligibility of diagnostics for patent protection may adversely affect our ability to obtain patents and may facilitate third-party challenges to any owned and licensed patents. Changes in either the patent laws or in interpretations and application of patent laws may also diminish the value of our existing intellectual property or intellectual property that we continue to develop. We cannot predict the breadth of claims that may be allowed or enforceable in our patents or in third-party patents.



**We may be involved in litigation related to intellectual property, which could be time-intensive and costly and may adversely affect our business, operating results or financial condition.**

We may receive notices of claims of direct or indirect infringement or misappropriation or misuse of other parties' proprietary rights from time to time and some of these claims may lead to litigation. We cannot assume that we will prevail in such actions, or that other actions alleging misappropriation or misuse by us of third-party trade secrets, infringement by us of third-party patents and trademarks or other rights, or the validity of our patents, trademarks or other rights, will not be asserted or prosecuted against us. We might not have been the first to make the inventions covered by each of our pending patent applications and we might not have been the first to file patent applications for these inventions. No assurance can be given that other patent applications will not have priority over our patent applications. If third parties bring these proceedings against our patents, we could incur significant costs and experience management distraction. Litigation may be necessary for us to enforce our patents and proprietary rights or to determine the scope, coverage and validity of the proprietary rights of others. The outcome of any litigation or other proceeding is inherently uncertain and might not be favorable to us, and we might not be able to obtain licenses to technology that we require on acceptable terms or at all. In addition, if we resort to legal proceedings to enforce our intellectual property rights or to determine the validity, scope and coverage of the intellectual property or other proprietary rights of others, the proceedings could be burdensome and expensive, even if we were to prevail. Any litigation that may be necessary in the future could result in substantial costs and diversion of resources and could have a material adverse effect on our business, financial condition and operating results.

In the event of a successful claim of infringement against us, we may be required to pay damages and ongoing royalties, and obtain one or more licenses from third parties, or be prohibited from selling our products. We may not be able to obtain these licenses on acceptable terms, if at all. We could incur substantial costs related to royalty payments for licenses obtained from third parties, which could negatively affect our financial results. In addition, our agreements with some of our customers, suppliers or other entities with whom we do business require us to defend or indemnify these parties to the extent they become involved in infringement claims, including the types of claims described above. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could have a material adverse effect on our business, financial condition, and results of operations.

On April 18, 2017, we received a letter from Rosetta Genomics Ltd. ("Rosetta"), stating that Rosetta expects to shortly be granted patents that cover the ThyraMIR® miRNA Gene Expression Classifier marketed and sold by a subsidiary of the Company. Such patents were subsequently issued on May 16, 2017. In the letter, Rosetta indicated an interest in discussing the terms of a royalty-bearing license agreement to cover our continuing sale of the ThyraMIR® miRNA Gene Expression Classifier. Based upon available information, we do not believe the Rosetta patents cover the sale or use of the ThyraMIR® miRNA Gene Expression Classifier.

**RISKS RELATING TO OUR CORPORATE STRUCTURE AND OUR COMMON STOCK**

**We do not meet one of The Nasdaq Capital Market continued listing requirements and therefore, we risk delisting, which may decrease our stock price and make it harder for our stockholders to trade our stock.**

Our common stock is currently listed for trading on The Nasdaq Capital Market. As previously disclosed in our Current Report on Form 8-K dated October 5, 2016, Heinrich Dreismann, Ph.D, a member of our Board who was also a member of our Audit Committee resigned effective as of September 30, 2016. As a result, we are not currently in compliance with NASDAQ Listing Rule 5605(c)(2)(A), which requires the Audit Committee be comprised of at least three independent members. We intend to appoint an additional independent director to our Board and to the Audit Committee prior to the end of the applicable cure period which is the sooner of the Company's annual meeting of stockholders or October 2, 2017. We were previously not in compliance with the NASDAQ minimum bid price and stockholder equity requirements. We effected a one-for-ten reverse split of our issued and outstanding common stock on December 28, 2016 and on January 13, 2017, we were notified by NASDAQ that we had regained compliance with the minimum bid price requirement. On April 10, 2017, we received written notice from NASDAQ that we were in compliance with the NASDAQ stockholder equity requirements.

Our common stock currently remains listed on The Nasdaq Capital Market under the symbol “IDXG.” There can be no assurance that we will be able to regain or maintain compliance with the NASDAQ continued listing requirements, or that our common stock will not be delisted from The Nasdaq Capital Market in the future. If our common stock is delisted by NASDAQ, it could lead to a number of negative implications, including an adverse effect on the price of our common stock, increased volatility in our common stock, reduced liquidity in our common stock, the loss of federal preemption of state securities laws and greater difficulty in obtaining financing. In addition, delisting of our common stock could deter broker-dealers from making a market in or otherwise seeking or generating interest in our common stock, could result in a loss of current or future coverage by certain sell-side analysts and might deter certain institutions and persons from investing in our securities at all. Delisting could also cause a loss of confidence of our customers, collaborators, vendors, suppliers and employees, which could harm our business and future prospects.

If our common stock is delisted by NASDAQ in the future, our common stock may be eligible to trade on the OTC Bulletin Board, OTC QB or another over-the-counter market. Any such alternative would likely result in it being more difficult for us to raise additional capital through the public or private sale of equity securities and for investors to dispose of, or obtain accurate quotations as to the market value of, our common stock. In addition, there can be no assurance that our common stock would be eligible for trading on any such alternative exchange or markets. For these reasons and others, delisting could adversely affect the price of our securities and our business, financial condition and results of operations.

**We have a substantial number of authorized common and preferred shares available for future issuance that could cause dilution of our stockholders’ interest, adversely impact the rights of holders of our common stock and cause our stock price to decline.**

We have a total of 100,000,000 shares of common stock and 5,000,000 shares of preferred stock authorized for issuance. As of May 5, 2017, 2017, we had 91,211,396 shares of common stock and 5,000,000 shares of preferred stock available for issuance. As of May 5, 2017, we have reserved 660,492 shares of our common stock for issuance upon the exercise of outstanding awards under our stock incentive plan, and there are no additional shares available for future grants of awards under our stock incentive plan. We may seek financing that could result in the issuance of additional shares of our capital stock and/or rights to acquire additional shares of our capital stock. We may also make acquisitions that result in issuances of additional shares of our capital stock. Those additional issuances of capital stock could result in substantial dilution of our existing stockholders. Furthermore, the book value per share of our common stock may be reduced. This reduction would occur if the exercise price of any issued warrants, the conversion price of any convertible notes or the conversion ratio of any issued preferred stock is lower than the book value per share of our common stock at the time of such exercise or conversion. Additionally, new investors in any subsequent issuances of our securities could gain rights, preferences and privileges senior to those of holders of common stock.

**Any weakness in our disclosure controls and procedures and our internal controls could have a material adverse effect on us.**

Our senior management has identified material weaknesses in our disclosure controls and procedures and our internal controls over financial reporting. Management is currently addressing these control weaknesses, but we cannot assure you that our corrective actions will be sufficient or timely and we cannot assure you that additional material weaknesses will not be identified in the future. Any such failure could adversely affect our ability to report financial results on a timely and accurate basis, which could have other material effects on our business, reputation, results of operations, financial condition or liquidity. Material weaknesses in internal controls over financial reporting or disclosure controls and procedures could also cause investors to lose confidence in our reported financial information which could have an adverse effect on the trading price of our securities.

**We have anti-takeover defenses that could delay or prevent an acquisition and could adversely affect the price of our common stock.**

Our certificate of incorporation, as amended, and amended and restated bylaws include provisions, such as providing for three classes of directors, which may make it more difficult to remove our directors and management and may adversely affect the price of our common stock. In addition, our certificate of incorporation, as amended, authorizes the issuance of “blank check” preferred stock, which allows our Board to create one or more classes of preferred stock with rights and preferences greater than those afforded to the holders of our common stock. This provision could have the effect of delaying, deterring or preventing a future takeover or a change in control, unless the takeover or change in control is approved by our Board. We are also subject to laws that may have a similar effect. For example, Section 203 of the General Corporation Law of the State of Delaware prohibits us from engaging in a business combination with an interested stockholder for a period of three years from the date the person became an interested stockholder unless certain conditions are met. As a result of the foregoing, it will be difficult for another company to acquire us and, therefore, could limit the price that possible investors might be willing to pay in the future for shares of our common stock. In addition, the rights of our common stockholders will be subject to, and may be adversely affected by, the rights of holders of any class or series of preferred stock that may be issued in the future and in this offering.

**We have not declared any cash dividends on our capital stock and do not intend to declare or pay any cash dividends in the foreseeable future. Future earnings, if any, will be used to finance the future operation and growth of our business. As a result, capital appreciation, if any, will be your sole source of gain.**

We have never paid cash dividends on our capital stock. We do not currently anticipate paying cash dividends on our common stock in the foreseeable future and we may not have sufficient funds legally available to pay dividends. Even if the funds are legally available for distribution, we may nevertheless decide not to pay any dividends. We presently intend to retain all earnings for our operations. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

**Our quarterly and annual revenues and operating results may vary, which may cause the price of our common stock to fluctuate.**

Our quarterly and annual operating results may vary as a result of a number of factors, including:

- the commencement, delay, cancellation or completion of sales and marketing programs;
- regulatory developments;
- uncertainty about when sales of our molecular diagnostic tests will be recognized;
- timing and amount of expenses for implementing new programs and accuracy of estimates of resources required for ongoing programs;
- adoption of and coverage and reimbursement for our molecular diagnostic tests;
- accounting for impairment of contingent liabilities which are recorded in operation;
- timing and integration of any acquisitions; and
- changes in regulations related to diagnostics, pharmaceutical, biotechnology and healthcare companies.

We believe that quarterly, and in certain instances annual, comparisons of our financial results may not necessarily be meaningful and should not be relied upon as an indication of future performance. Fluctuations in quarterly and annual results could materially and adversely affect the market price of our common stock in a manner unrelated to our long-term operating performance.

**Our stock price is volatile and could be further affected by events not within our control, and an investment in our common stock could suffer a decline in value.**

During the first quarter of 2017, our common stock traded at a low of \$2.10 and a high of \$14.25. During 2016, our common stock traded at a low of \$0.70 and a high of \$19.80. The trading price of our common stock has been and will continue to be subject to:

- general volatility in the trading markets;
- significant fluctuations in our quarterly operating results;
- significant changes in our cash and cash equivalent reserves;
- announcements regarding our business or the business of our competitors;
- announcements regarding our equity offerings;
- strategic actions by us or our competitors, such as acquisitions or restructurings;
- industry and/or regulatory developments;
- changes in revenue mix;
- changes in revenue and revenue growth rates for us and for the industries in which we operate;
- changes in accounting standards, policies, guidance, interpretations or principles; and
- statements or changes in opinions, ratings or earnings estimates made by brokerage firms or industry analysts relating to the markets in which we operate or expect to operate.

\*The prices of our common stock listed above have been adjusted to reflect a one-for-ten reverse split on our issued and outstanding shares of common stock effected on December 28, 2016.

**We may be subject to securities litigation, which is expensive and could divert our management’s attention.**

The market price of our securities may be volatile, and in the past companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management’s attention from other business concerns, which could seriously harm our business.

**The indemnification rights provided to our directors, officers and employees may result in substantial expenditures by us and may discourage lawsuits against its directors, officers, and employees.**

Our certificate of incorporation, as amended, contains provisions permitting us to enter into indemnification agreements with our directors, officers, and employees. The foregoing indemnification obligations could result in us incurring substantial expenditures to cover the cost of settlement or damage awards against directors and officers, which we may be unable to recoup. These provisions and resultant costs may also discourage us from bringing a lawsuit against our directors and officers for breaches of their fiduciary duties, and may similarly discourage the filing of derivative litigation by our stockholders against our directors and officers even though such actions, if successful, might otherwise benefit us and our stockholders.

**We are a smaller reporting company and we cannot be certain if the reduced disclosure requirements applicable to smaller reporting companies will make our common stock less attractive to investors.**

We are currently a “smaller reporting company” as defined in the Securities Exchange Act of 1934, and are thus allowed to provide simplified executive compensation disclosures in our filings, are exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that an independent registered public accounting firm provide an attestation report on the effectiveness of internal control over financial reporting and have certain other decreased disclosure obligations in our SEC filings. We cannot predict whether investors will find our common stock less attractive because of our reliance on any of these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

## **Risks Related to this Offering**

### **There is no public market for the pre-funded warrants being offered in this offering.**

There is no established public trading market for the pre-funded warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the pre-funded warrants on any securities exchange or nationally recognized trading system, including the Nasdaq Capital Market. Without an active market, the liquidity of the pre-funded warrants will be limited.

### **Management will have broad discretion as to the use of proceeds from this offering and we may use the net proceeds in ways with which you may disagree.**

We intend to use the net proceeds of this offering for working capital, trade payables, payment of legacy CSO obligations that were not assumed by Publicis, business investment, and general corporate purposes. Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. Accordingly, you will be relying on the judgment of our management on the use of net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. Our failure to apply these funds effectively could have a material adverse effect on our business and cause the price of our common stock to decline.

### **The offering price will be set by our Board of Directors and does not necessarily indicate the actual or market value of our common stock.**

Our Board of Directors will approve the offering price and other terms of this offering after considering, among other things: the number of shares authorized in our certificate of incorporation; the current market price of our common stock; trading prices of our common stock over time; the volatility of our common stock; our current financial condition and the prospects for our future cash flows; the availability of and likely cost of capital of other potential sources of capital; the characteristics of interested investors and market and economic conditions at the time of the offering. The offering price is not intended to bear any relationship to the book value of our assets or our past operations, cash flows, losses, financial condition, net worth or any other established criteria used to value securities. The offering price may not be indicative of the fair value of the common stock.

### **If you purchase the common stock and pre-funded warrants sold in this offering, you will experience immediate dilution as a result of this offering and future equity issuances.**

Because the price per share of our common stock being offered is higher than the book value per share of our common stock, you will suffer immediate substantial dilution in the net tangible book value of the common stock you purchase in this offering. See the section entitled "*Dilution*" of this prospectus for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering. The discussion above assumes no sale of pre-funded warrants, which, if sold, would reduce the number of shares of common stock that we sell and issue in this offering on a one-for-one basis.

The issuance of additional shares of our common stock in future offerings could be dilutive to stockholders if they do not invest in future offerings. Moreover, to the extent that we issue options or warrants to purchase, or securities convertible into or exchangeable for, shares of our common stock in the future and those options, warrants or other securities are exercised, converted or exchanged, stockholders may experience further dilution.

**Holders of pre-funded warrants purchased in this offering will have no rights as common stockholders until such holders exercise their pre-funded warrants and acquire our common stock.**

Until holders of pre-funded warrants acquire shares of our common stock upon exercise of the pre-funded warrants, holders of pre-funded warrants will have no rights with respect to the shares of our common stock underlying such pre-funded warrants. Upon exercise of the pre-funded warrants, the holders will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

**Provisions of the warrants offered by this prospectus could discourage an acquisition of us by a third party.**

In addition to the discussion of the provisions of our Certificate of Incorporation, as amended, certain provisions of the warrants offered by this prospectus could make it more difficult or expensive for a third party to acquire us. The warrants prohibit us from engaging in certain transactions constituting “fundamental transactions” unless, among other things, the surviving entity assumes our obligations under the warrants. Further, the warrants provide that, in the event of certain transactions constituting “fundamental transactions,” with some exception, holders of such warrants will have the right, at their option, to require us to repurchase such warrants at a price described in such warrants. These and other provisions of the warrants offered by this prospectus could prevent or deter a third party from acquiring us even where the acquisition could be beneficial to you.

**The exercise price of the warrants offered by this prospectus will not be adjusted for certain dilutive events.**

The exercise price of the warrants offered by this prospectus is subject to adjustment for certain events, including, but not limited to, certain issuances of capital stock, options, convertible securities and other securities. However, the exercise prices will not be adjusted for dilutive issuances of securities considered “excluded securities” and there may be transactions or occurrences that may adversely affect the market price of our Common Stock or the market value of such warrants without resulting in an adjustment of the exercise prices of such warrants.

**If we explore or engage in future business combinations or other transactions, we may be subject to various uncertainties and risks.**

From time-to-time, unrelated third-parties may approach the Company about potential transactions, including business combinations. As such, to date, we have not entered into any agreements related to any business combination. While we may explore such opportunities when they arise, we could not pursue any proposed business combination or other transaction unless our board of directors first has determined that doing so would be in our and our stockholders' interest. There can be no assurance that we will negotiate acceptable terms, enter into binding agreements or successfully consummate any business combination or other transaction with this private company or any other third parties.

We cannot currently predict the effects a future, potential business combination or other transaction would have on holders of the pre-funded warrants or any of our other securities. There are various uncertainties and risks relating to our evaluation and negotiation of possible business combination or other transactions, our ability to consummate such transactions and the consummation of such transactions, including:

- evaluation and negotiation of a proposed transaction may distract management from focusing our time and resources on execution of our operating plan, which could have a material adverse effect on our operating results and business;
- the process of evaluating proposed transactions may be time consuming and expensive and may result in the loss of business opportunities;
- perceived uncertainties as to our future direction may result in increased difficulties in retaining key employees and recruiting new employees, particularly senior management;
- even if our board of directors negotiates a definitive agreement, successful integration or execution of a business combination or other transaction will be subject to additional risks;
- the current market price of our Common Stock may reflect a market assumption that a transaction will occur, and during the period in which we are considering a transaction, the market price of our Common Stock could be highly volatile;
- a failure to complete a transaction could result in a negative perception by our investors generally and could cause a decline in the market price of our Common Stock, as well as lead to greater volatility in the market price of our Common Stock, all of which could adversely affect our ability to access the equity and financial markets, as well as our ability to explore and enter into different strategic alternatives;
- expected benefits may not be successfully achieved;
- such transactions may increase our operating expenses and cash requirements, cause us to assume or incur indebtedness or contingent liabilities, make it difficult to retain management and key personnel; and
- dilution of our existing stockholders if such transaction involves our issuing dilutive securities.



## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains or incorporates by reference “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as “may,” “should,” “anticipate,” “estimate,” “expect,” “projects,” “intends,” “plans,” “believes” and words and terms of similar substance used in connection with any discussion of future operating or financial performance, identify forward-looking statements. Forward-looking statements included or incorporated by reference in this prospectus include, for example, statements about:

- our ability to profitably grow our business, including our ability to finance our business on acceptable terms and successfully compete in the market;
- our ability to continue as a going concern due to our operating history of net losses, negative working capital and insufficient cash flows, and lack of liquidity to pay our current obligations;
- our ability to obtain broad adoption of and reimbursement for our molecular diagnostic tests in a changing reimbursement environment;
- whether we are able to successfully utilize our operating experience to sell our molecular diagnostic tests;
- our limited operating history as a molecular diagnostics company;
- our dependence on a concentrated selection of payors for our molecular diagnostic tests;
- the demand for our molecular diagnostic tests from physicians and patients;
- our reliance on our internal sales forces for business expansion;
- our dependence on third parties for the supply of some of the materials used in our molecular diagnostic tests;
- our ability to scale our operations, testing capacity and processing technology;
- our ability to meet the remaining legacy obligations of our Commercial Services, or CSO, business previously sold;
- our ability to continue to secure sufficient levels of reimbursement to continue to progress our business;
- our ability to compete successfully with companies with greater financial resources;
- our ability to obtain sufficient data and samples to cost effectively and timely perform sufficient clinical trials in order to support our current and future products;
- product liability claims against us;
- our involvement in current and future litigation against us;
- the effect current and future laws, licensing requirements and regulation have on our business including the changing U.S. Food and Drug Administration, or the FDA, environment as it relates to molecular diagnostics;
- the effect of potential adverse findings resulting from regulatory audits of our billing practices and the impact such results could have on our business;
- our exposure to environmental liabilities as a result of our business;
- the susceptibility of our information systems to security breaches, loss of data and other disruptions;
- our ability to enter into effective electronic data interchange arrangements with our customers
- our billing practices and our ability to collect on claims for the sale of our molecular diagnostic tests;

- our ability to attract and retain qualified sales representatives and other key employees and management personnel;
- competition in the segment of the molecular diagnostics industry in which we operate or expect to operate;
- our ability to obtain additional funds in order to implement our business models and strategies;
- the results of any future impairment testing for other intangible assets;
- our ability to successfully identify, complete and integrate any future acquisitions and the effects of any such items on our revenues, profitability and ongoing business;
- our compliance with our license agreements and our ability to protect and defend our intellectual property rights;
- our ability to maintain our listing with The Nasdaq Capital Market, despite our having received a notice of non-compliance for failing to have three independent audit committee members;
- the effect of material weaknesses in our disclosure controls and procedures and internal controls;
- failure of third-party service providers to perform their obligations to us; and
- the volatility of our stock price and fluctuations in our quarterly and annual revenues and earnings.

Forward-looking statements represent management's present judgment regarding future events. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results and financial condition may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. Important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements include, among others, the risk factors identified under the caption "Risk Factors", beginning on page 17 of this prospectus, and in the other the documents we have filed, or will file, with the Securities and Exchange Commission. Forward-looking statements contained in this prospectus speak as of the date hereof and the Company does not undertake to update any of these forward-looking statements to reflect a change in its views or events or circumstances that occur after such date.

In evaluating our business, prospective investors should carefully consider these factors in addition to the other information set forth in this prospectus, including under the caption "Risk Factors." All forward-looking statements included in this document are based on information available to us on the date hereof. We disclaim any intent to update any forward-looking statements.

In this prospectus, we refer to information regarding markets for our products and other industry data. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by third parties, industry, medical and general publications, government data and similar sources. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires. We believe that all such information has been obtained from reliable sources that are customarily relied upon by companies in our industry. However, we have not independently verified any such information.

## USE OF PROCEEDS

We estimate that the net proceeds from this offering will be approximately \$        million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their over-allotment option in full, we estimate that our net proceeds will be approximately \$        million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.<sup>2</sup> We will only receive additional proceeds from the exercise of the pre-funded warrants issuable in connection with this offering if such warrants are exercised at their exercise price of \$.01 and the holders of such warrants pay the exercise price in cash upon such exercise and do not utilize the cashless exercise provision of the warrants. Such proceeds with respect to the pre-funded warrants could not exceed \$        .

Except where indicated, the foregoing discussion assumes (i) no exercise of the underwriters' option to purchase up to an additional shares of common stock and (ii) no sale of pre-funded warrants.

We intend to use net proceeds from this offering for working capital, trade payables, payment of legacy CSO obligations that were not assumed by Publicis, business investment, and general corporate purposes. We have not yet determined the amount of net proceeds to be used specifically for any particular purpose or the timing of these expenditures. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds from the sale of these securities. See "Risk Factors" for a discussion of certain risks that may affect our intended use of the net proceeds from this offering.

Our expected use of net proceeds from this offering represents our current intentions based upon our present plans and business condition. As of the date of this prospectus, we cannot currently allocate specific percentages of the net proceeds that we may use for the purposes specified above, and we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering, or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual use of the net proceeds will vary depending on numerous factors, including our ability to obtain additional financing. We may find it necessary or advisable to use the net proceeds for other purposes, and our management will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the net proceeds from this offering.

Pending the use of the net proceeds from this offering, we intend to invest the net proceeds in investment-grade, interest-bearing instruments.

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<sup>2</sup> Pursuant to our Employment Agreement with Jack Stover, our President and Chief Executive Officer, dated October 30, 2016, Mr. Stover is entitled to receive a bonus equal to 3% of the net proceeds received by us in the offering, or approximately \$        .

## PRICE RANGE OF COMMON STOCK

Our common stock trades on The Nasdaq Capital Market under the symbol “IDYG.” The last reported sale price for our common stock on May 17, 2017 was \$2.35 per share. As of May 12, 2017, we had approximately 142 holders of record of our common stock. The number of record holders was determined from the records of our transfer agent and does not include beneficial owners of common stock whose shares are held in the names of various security brokers, dealers, and registered clearing agencies. A description of the common stock that we are issuing in this offering is set forth under the heading “Description of Securities” beginning on page 62 of this prospectus.

The following table sets forth for the periods indicated the high and low sale prices per share of our common stock as reported on The Nasdaq Capital Market, but as adjusted to reflect applicable reverse stock splits:

	<u>High</u>	<u>Low</u>
<b>Fiscal Year ended December 31, 2015</b>		
First Quarter	\$ 21.50	\$ 13.00
Second Quarter	\$ 18.10	\$ 10.00
Third Quarter	\$ 27.40	\$ 14.00
Fourth Quarter	\$ 19.80	\$ 4.20
<b>Fiscal Year ended December 31, 2016</b>		
First Quarter	\$ 4.80	\$ 1.90
Second Quarter	\$ 6.40	\$ 2.20
Third Quarter	\$ 5.10	\$ 1.50
Fourth Quarter	\$ 19.80	\$ 0.70
<b>Fiscal Year ended December 31, 2017</b>		
First Quarter	\$ 14.25	\$ 2.10
Second Quarter (through May , 2017)		

## DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to dividend policy will be made at the discretion of our board of directors.

## CAPITALIZATION

The following table sets forth our capitalization as of March 31, 2017:

- on an actual basis; and
- on an adjusted basis, after going effect to the application of the net proceeds of this offering and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

The information set forth in the following table should be read in conjunction with and is qualified in its entirety by our “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and consolidated financial statements and notes thereto incorporated by reference in this prospectus. See “*The Offering*” in this prospectus for information relating to the expected number of shares of our common stock to be outstanding after this offering.

	<b>Actual as of March 31, 2017 (Unaudited)</b>	<b>As Adjusted for this Offering**</b>
Cash and cash equivalents	\$ 7,126	\$ 17,626
Total assets	46,975	57,475
Long-term debt, net of debt discount	4,364	—
Total liabilities	22,406	18,042
<b>Stockholders’ equity</b>		
Preferred stock, par value \$0.01 per share; 5,000,000 shares authorized, no shares issued and outstanding	—	—
Common stock, par value \$.01 per share; 100,000,000 shares authorized; 6,788,059 share issued and 6,723,709 outstanding, actual; 8,852,954 issued and 8,788,604 outstanding, as adjusted for stock issued for the April debt conversions*; 13,832,207 issued and 13,767,857 outstanding, as adjusted to give effect to this offering	68	138
Additional paid-in capital	143,342	158,136
Accumulated deficit	(117,170)	(117,170)
Treasury stock, at cost (64,350 shares)	(1,671)	(1,671)
	24,569	39,433
<b>Total stockholders’ equity</b>		
<b>Total liabilities and stockholders’ equity</b>	<b>\$ 46,975</b>	<b>\$ 57,475</b>

\* Due to the conversion of the remaining \$4.7 million of convertible debt in April, 2017, total stockholders equity increased by \$4.7 million as 2.1 million shares were issued in order to convert the balance of the debt to equity.

\*\* Assumes a \$12.0 million capital raise with net cash proceeds of \$10.5 million; number of shares derived by dividing closing stock price on May 18, 2017 of \$2.41.

The number of shares of common stock to be outstanding immediately after this offering is based on 8,788,604 shares of common stock outstanding as of May 1, 2017 and excludes:

- Shares of our common stock that may be issued upon exercise of pre-funded warrants issued in this offering;
- 68,000 shares of our common stock issuable upon the settlement of restricted stock units, or RSUs, issued to our employees and directors;
- 84,963 shares of common stock issuable upon settlement of stock appreciation rights, or SARs, issued to certain executive officers and members of senior management, at a weighted average exercise price of \$42.91 per share, of which 84,963 shares of common stock are vested and exercisable;
- 507,529 shares of common stock issuable upon exercise of outstanding options under the 2014 Plan, of which 184,647 are subject to stockholder approval with respect to their grant and of an increase in the number of shares in the 2014 Plan; and
- 955,000 shares of common stock issuable upon the exercise of warrants outstanding at a weighted average exercise price of \$4.69 per share.

### **OUTSTANDING WARRANTS**

On January 20, 2017, we entered into a placement agency agreement with Maxim Group LLC in connection with the registered direct public offering of 855,000 shares of our common stock, par value \$0.01 per share. In a concurrent private placement, we agreed to sell through Maxim Group LLC as placement agent warrants to purchase 855,000 shares of common stock (the “Concurrent Warrants”) with an exercise price of \$4.69 per Concurrent Warrant. The combined purchase price for one common share and one Concurrent Warrant was \$4.69.

The Concurrent Warrants have an exercise price of \$4.69 per share, which is subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting the common stock and also upon any distributions of assets to our stockholders. Each Concurrent Warrant will be exercisable upon issuance and will have a five year term. Subject to limited exceptions, a holder of Concurrent Warrants will not have the right to exercise any portion of its Concurrent Warrants if the holder, together with its affiliates, would beneficially own in excess of 4.99% (or, at the election of the holder, 9.99%) of the number of shares of common stock outstanding immediately after giving effect to such exercise (the “Beneficial Ownership Limitation”); provided, however, that upon 61 days’ prior notice to us, the holder may increase the Beneficial Ownership Limitation, provided that in no event shall the Beneficial Ownership Limitation exceed 9.99%.

At any time after their issuance, if and only if no effective registration statement registering, or no current prospectus is available for, the issuance of the shares of common stock underlying the Concurrent Warrants, their holders may exercise the Concurrent Warrants by means of a “cashless exercise.”

On March 22, 2017, we and our subsidiaries entered into a termination agreement with the RedPath Equityholder Representative, LLC (the “RedPath Equityholder Representative”). Under the terms of the termination agreement, RedPath Equityholder Representative agreed to terminate certain royalty and milestone rights (collectively, the “Royalties”) provided under that certain Contingent Consideration Agreement, dated October 31, 2014, entered into in connection with our acquisition of RedPath. In addition, the RedPath Equityholder Representative agreed to terminate its rights, granted under that certain Agreement and Plan of Merger, dated October 31, 2014, among RedPath, we and certain other parties, to designate an observer to be present in an observer capacity at meetings of our board of directors (the “Board Observer Rights”).

As consideration for the termination of its Royalties and Board Observer Rights, we agreed to issue warrants (the “RedPath Warrants”) to purchase up to an aggregate of 100,000 shares of our common stock to certain former equityholders of RedPath, as designated by the RedPath Equityholder Representative. We have 10 days from the instruction of the RedPath Equityholder Representative to effect the issuance of any RedPath Warrants.

The RedPath Warrants will have an exercise price of \$4.69 per share, which is subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting the common stock. The RedPath Warrants will be exercisable at any time on or after the six month anniversary of the issuance date (the “Initial Exercise Date”) and will survive until the fifth anniversary of the Initial Exercise Date.

If at any time we grant, issue or sell any instruments that are convertible into or exercisable or exchangeable for common stock or rights to purchase stock, warrants, securities or other property pro rata to all of the stockholders (the “Purchase Rights”), then the holder of a RedPath Warrant will be entitled to acquire, on the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the holder could have acquired if the holder had held the number of shares of common stock acquirable upon complete exercise of the RedPath Warrant immediately before the date on which a record is taken or otherwise determined for the grant, issuance or sale of such Purchase Rights. In addition, during such time as the RedPath Warrants are outstanding, if we declare any dividend or other distribution of its assets (or rights to acquire its assets) to all of the stockholders, by way of return of capital or otherwise (a “Distribution”), then, in each such case, the holder will be entitled to participate in such Distribution to the same extent that the holder would have participated therein if the holder had held the number of shares of common stock acquirable upon complete exercise of the RedPath Warrant immediately before the date of which a record is taken or otherwise determined for participation in such Distribution.

### DILUTION

Our historical net tangible book deficit as of March 31, 2017 was approximately \$11.0 million, or \$(1.63) per share of common stock. Our historical net tangible book deficit is the amount of our total tangible assets less our liabilities. Historical net tangible book deficit per common share is our historical net tangible book deficit divided by the number of shares of common stock outstanding as of March 31, 2017.

After giving effect to the sale of \_\_\_\_\_ shares of our common stock at the assumed combined public offering price of \$ \_\_\_\_\_ per share (the last reported sale price of our common stock on the Nasdaq Capital Market on \_\_\_\_\_, 2017), and after deducting the estimated underwriting discount and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of December 31, 2016 would have been approximately \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share of common stock. This represents an immediate increase in as adjusted net tangible book value of \$ \_\_\_\_\_ per share to our existing stockholders, and an immediate dilution of \$ \_\_\_\_\_ per share to new investors purchasing securities in this offering at the assumed combined public offering price.

The following table illustrates this dilution on a per share basis:

Assumed combined public offering price per share		\$
Historical net tangible book deficit per share as of March 31, 2017	\$	(1.63)
Pro forma increase in net tangible book value per share attributable to investors in this offering	\$	1.03
Pro forma increase in net tangible book value per share attributable to issuance of common stock <sup>(1)</sup>	\$	0.88
As adjusted net tangible book value per share after this offering		\$
Dilution per share to investors participating in this offering		\$

(1) Shares issued in April as a result of the debt exchange.

The discussion and table above assume (i) no sale of pre-funded warrants, which, if sold, would reduce the number of shares of common stock that we are offering on a one-for-one basis and (ii) no exercise of the underwriter's option to purchase up to additional shares of common stock.

The foregoing discussion and table do not take into account further dilution to investors in this offering that could occur upon the exercise of outstanding options and warrants, including the warrants offered in this offering, having a per share exercise price less than the public offering price per share in this offering.

The above table is based on 8,788,604 shares of common stock outstanding as of May 5, 2017, gives effect to note conversions in March and April 2017 and excludes:

- Shares of our common stock that may be issued upon exercise of pre-funded warrants issued in this offering;
- 68,000 shares of our common stock issuable upon the settlement of restricted stock units, or RSUs, issued to our employees and directors;
- 84,963 shares of common stock issuable upon settlement of stock appreciation rights, or SARs, issued to certain executive officers and members of senior management, at a weighted average exercise price of \$42.91 per share, of which 84,963 shares of common stock are vested and exercisable;
- 507,529 shares of common stock issuable upon exercise of outstanding options under the 2014 Plan, of which 184,647 are subject to stockholder approval with respect to their grant and of an increase in the number of shares in the 2014 Plan; and
- 955,000 shares of common stock issuable upon the exercise of warrants outstanding at a weighted average exercise price of \$4.69 per share.

The information above assumes that the underwriters do not exercise their over-allotment option. If the underwriters exercise their over-allotment option in full, the as adjusted net tangible book value will increase to \$ per share, representing an immediate increase to existing stockholders of \$ per share and an immediate dilution of \$ per share to new investors.



To the extent that outstanding options or warrants, new options are issued under our equity incentive plan, or we issue additional shares of common stock in the future, there may be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

#### SECURITY OWNERSHIP OF BENEFICIAL OWNERS AND MANAGEMENT

The following table shows, as of April 30, 2017, the number of shares of our common stock beneficially owned by: (i) each stockholder who is known by us to own beneficially in excess of 5% of our outstanding common stock; (ii) each of our current directors; (iii) each of our named executive officers; and (iv) all directors and executive officers as a group.

Except as otherwise indicated, the persons listed below have sole voting and investment power with respect to all shares of common stock owned by them and all information with respect to beneficial ownership has been furnished to us by the respective stockholder. The address of the persons listed below is c/o Interpace Diagnostics Group, Inc., Morris Corporate Center One, 300 Interpace Parkway, Building A, Parsippany, New Jersey 07054. On December 28, 2016, the Company effected a one-for-ten reverse split of the issued and outstanding shares of its common stock in order to achieve the requisite increase in the market price of its common stock to be in compliance with the NASDAQ minimum bid price requirement. At the effective time of the reverse split, every 10 shares of common stock issued and outstanding were automatically combined into one share of issued and outstanding common stock, without any change in the par value per share. The share totals below reflect that split. The percentage of beneficial ownership is based on 8,788,604 shares of common stock outstanding on April 30, 2017.

Name of Beneficial Owner	Number of Shares Beneficially Owned (1)	Percent of Shares Outstanding
Executive officers and directors:		
Jack E. Stover (2)	73,936(6)	*
James Early (3)	8,955(7)	*
Stephen J. Sullivan (4)	23,032(8)	*
Joseph Keegan (5)	6,757(9)	*
All directors and executive officers as a group (4 persons)	105,923(6) (7) (8)(9)	1.2%
5% stockholders:		
John P. Dugan	486,988	5.5%

\* Represents less than 1% of shares of common stock outstanding.

(1) Beneficial ownership and percentage ownership are determined in accordance with the rules and regulations of the SEC and include voting or investment power with respect to shares of stock. This information does not necessarily indicate beneficial ownership for any other purpose. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we include shares underlying common stock derivatives, such as options, RSUs and SARs that a person has the right to acquire within 60 days of April 30, 2017. Such shares, however, are not deemed outstanding for the purpose of computing the percentage ownership of any other person.

(2) Currently serves as our President and Chief Executive Officer and as a member of the Board.

(3) Currently serves as our Chief Financial Officer, Secretary and Treasurer.

(4) Currently serves as Chairman of the Board.

(5) Member of the Board.

(6) Includes 6,666 RSUs that would vest immediately upon retirement and 55,411 shares issuable pursuant to options exercisable within 60 days of the date of this Form S-1.

(7) Includes 8,955 shares issuable pursuant to options exercisable within 60 days of the date of this Form S-1.

(8) Includes 6,666 RSUs that would vest immediately upon retirement and 3,250 shares issuable pursuant to options exercisable within 60 days of the date of this Form S-1.

(9) Includes 2,500 shares issuable pursuant to options exercisable within 60 days of the date of this Form S-1.

(10) Includes 61,875 shares of our common stock held by Mr. Dugan's spouse, which may be deemed to be beneficially owned by Mr. Dugan.

#### **DESCRIPTION OF SECURITIES**

##### **Description of Capital Stock**

The following description of our common stock summarizes the material terms and provisions of the common stock that we may issue in connection with this offering. It may not contain all the information that is important to you. For the complete terms of our common stock, please refer to our Certificate of Incorporation, as amended (the "amended certificate of incorporation") and our amended and restated bylaws, which are filed as exhibits to the registration statement which includes this prospectus. The Delaware General Corporation Law ("DGCL") may also affect the terms of these securities.

## **Common Stock**

On December 22, 2015, we filed a certificate of amendment to our certificate of incorporation with the Secretary of State of the State of Delaware to increase the number of authorized shares of common stock from 40,000,000 to 100,000,000, par value \$0.01 per share. Additionally, on December 28, 2016, we filed a certificate of amendment to our certificate of incorporation, or the Certificate of Amendment, to effectuate a one-for-ten reverse split of our issued and outstanding common stock. At the effective time of the reverse split, every 10 shares of common stock issued and outstanding were automatically combined into one share of issued and outstanding common stock, without any change in the par value per share. As of May 5, 2017, 8,788,604 shares of our common stock were outstanding.

The following is qualified in its entirety by reference to our certificate of incorporation, as amended, and our amended and restated bylaws, and by the provisions of applicable law. A copy of our certificate of incorporation, as amended, and our amended and restated bylaws are included as exhibits to our most recent Annual Report on Form 10-K which is incorporated herein by reference. A copy of the Certificate of Amendment was filed as Exhibit 3.1 to our Current Report on Form 8-K filed on December 28, 2016.

Holders of our common stock are entitled to one vote for each share on all matters submitted to a vote of stockholders, and do not have cumulative voting rights. Generally, in matters other than the election of directors, the affirmative vote of a majority of the votes cast authorizes such an action, except where Delaware General Corporation Law prescribes a different percentage of votes or a different exercise of voting power. For the election of directors, directors are elected by a plurality of the votes of the shares present in person or represented by proxy and entitled to vote. Holders of our common stock are entitled to receive, as, when and if declared by our board of directors from time to time, such dividends and other distributions in cash, stock or property from our assets or funds legally available for such purposes, subject to any preferential dividend or other rights of any then outstanding preferred stock.

No preemptive, conversion, or other subscription rights apply to our common stock. All outstanding shares of our common stock are fully paid and non-assessable. In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in the assets available for distribution, subject to any preferential or other rights of any then outstanding preferred stock. The voting, dividend and liquidation rights of the holders of our common stock are subject to and qualified by the rights of the holders of the preferred stock *Listing*. Our common stock is listed on The Nasdaq Capital Market under the symbol "IDXG." *Transfer Agent and Registrar*. The transfer agent for our common stock is American Stock Transfer & Trust Company, LLC. Its address is 6201 15th Avenue, Brooklyn, NY 11219.

## **Pre-Funded Warrants**

*The following summary of certain terms and provisions of pre-funded warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the pre-funded warrant, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of pre-funded warrant for a complete description of the terms and conditions of the pre-funded warrants.*

*Duration and Exercise Price.* Each pre-funded warrant offered hereby will have an initial exercise price per share equal to \$0.01. The pre-funded warrants will be immediately exercisable and may be exercised at any time until the pre-funded warrants are exercised in full. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock and the exercise price.

*Exercisability.* The pre-funded warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the pre-funded warrant to the extent that the holder would own more than 4.99 % of the outstanding common stock immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's pre-funded warrants up to 9.9 % of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the pre-funded warrants. Purchasers of pre-funded warrants in this offering may also elect prior to the issuance of the pre-funded warrants to have the initial exercise limitation set at \_\_\_\_\_ % of our outstanding common stock. No fractional shares of common stock will be issued in connection with the exercise of a pre-funded warrant. In lieu of fractional shares, we will either pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price or round up to the next whole share.

*Cashless Exercise.* If, at the time a holder exercises its pre-funded warrants, a registration statement registering the issuance of the shares of common stock underlying the pre-funded warrants under the Securities Act is not then effective or available and an exemption from registration under the Securities Act is not available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the pre-funded warrants.

*Transferability.* Subject to applicable laws, a pre-funded warrant may be transferred at the option of the holder upon surrender of the pre-funded warrant to us together with the appropriate instruments of transfer.

*Exchange Listing.* We do not intend to list the pre-funded warrants on any securities exchange or nationally recognized trading system.

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

### **Certain Effects of Authorized but Unissued Stock**

We have shares of common stock and preferred stock available for future issuance without stockholder approval. We may issue these additional shares for a variety of corporate purposes, including future public or private offerings to raise additional capital or to facilitate corporate acquisitions or for payment as a dividend on our capital stock. The existence of unissued and unreserved preferred stock may enable our board of directors to issue shares of preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of our management. In addition, if we issue additional preferred stock, the issuance could adversely affect the voting power of holders of common stock and the likelihood that holders of common stock will receive dividend payments or payments upon liquidation.

### **Anti-Takeover Effects of Provisions of Our Charter Documents**

Our amended certificate of incorporation provides for our board of directors to be divided into three classes serving staggered terms, Class I, Class II, and Class III. As of April 30, 2017, there is no Class II director. We intend to appoint an additional independent director to our Board and to the Audit Committee, who will be a Class II director, prior to the sooner of the Company's annual meeting of stockholders or October 2, 2017.

Approximately one-third of our board of directors will be elected each year. The provision for a classified board could prevent a party who acquires control of a majority of the outstanding voting stock from obtaining control of the board of directors until the second annual stockholders meeting following the date the acquirer obtains the controlling stock interest. The classified board provision could discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of Interpace and could increase the likelihood that incumbent directors will retain their positions. Our amended certificate of incorporation provides that directors may be removed only with cause by the affirmative vote of the holders of at least two-thirds of the shares of capital stock of the Company issued and outstanding and entitled to vote generally in the election of directors.

Our amended certificate of incorporation requires that certain amendments to the amended certificate of incorporation and amendments by the stockholders of our bylaws require the affirmative vote of at least 75% of the shares of capital stock of the Company issued and outstanding and entitled to vote generally in the election of directors. These provisions could discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of the Company and could delay changes in management.

Our amended and restated bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual stockholders meeting, including proposed nominations of persons for election to our board of directors. At an annual stockholders meeting, stockholders may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our board of directors. Stockholders may also consider a proposal or nomination by a person who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given to the Secretary of the Company timely written notice, in proper form, of his or her intention to bring that business before the annual stockholders meeting. The amended and restated bylaws do not give our board of directors the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting of the stockholders. However our bylaws may have the effect of precluding the conduct of business at a meeting if the proper procedures are not followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of the Company.

Our amended and restated bylaws provide that only our board of directors, the chairperson of the board, the President or the Chief Executive Officer may call a special meeting of stockholders. Because our stockholders do not have the right to call a special meeting, a stockholder could not force stockholder consideration of a proposal over the opposition of our board of directors by calling a special meeting of stockholders prior to such time as a majority of our board of directors, the chairperson of the board, the President or the Chief Executive Officer believed the matter should be considered or until the next annual meeting provided that the requestor met the notice requirements. The restriction on the ability of stockholders to call a special meeting means that a proposal to replace the board also could be delayed until the next annual stockholders meeting.

Our amended certificate of incorporation does not allow stockholders to act by written consent without a meeting if a class of capital stock is registered under Section 12 of the Exchange Act. Without the availability of stockholder's actions by written consent, a holder controlling a majority of our capital stock would not be able to amend our bylaws or remove directors without holding a stockholders' meeting.

#### **Anti-Takeover Effects of Provisions of Delaware Law**

We are subject to the provisions of Section 203 of the DGCL, or Section 203. Under Section 203, we would generally be prohibited from engaging in any business combination with any interested stockholder for a period of three years following the time that this stockholder became an interested stockholder unless:

- prior to this time, our board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding shares owned by persons who are directors and also officers, and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to such time, the business combination is approved by our board of directors and authorized at a special or annual stockholders meeting, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Under Section 203, a “business combination” includes:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder, subject to limited exceptions;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

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

#### **Limitation of Liability and Indemnification**

Our amended certificate of incorporation provides that our directors shall not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability for breach of the director’s duty of loyalty to us or our stockholders, for acts or omissions not in good faith or involving intentional misconduct or a knowing violation of law, for payment of dividends or approval of stock purchases or redemptions that are prohibited by the DGCL, or for any transaction from which the director derived an improper personal benefit.

Under the DGCL, our directors have a fiduciary duty to us that is not eliminated by this provision of the amended certificate of incorporation and, in appropriate circumstances, equitable remedies such as injunctive or other forms of non-monetary relief will remain available. This provision also does not affect our directors’ responsibilities under any other laws, such as federal securities laws or state or federal environmental laws.

Section 145 of the DGCL empowers a corporation to indemnify its directors and officers against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by them in connection with any action, suit or proceeding brought by third parties by reason of the fact that they were or are directors or officers of the corporation, if they acted in good faith, in a manner they reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe that their conduct was unlawful. The DGCL provides further that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which the directors and officers may be entitled under the corporation's bylaws, any agreement, a vote of stockholders or otherwise. Our amended certificate of incorporation provides that, to the fullest extent permitted by Section 145 of the DGCL, we shall indemnify any person who is or was a director or officer of us, or is or was serving at our request as a director, officer or trustee of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, against the expenses, liabilities or other matters referred to in or covered by Section 145 of the DGCL. Our amended and restated bylaws provide that we will indemnify any person who was or is a party or threatened to be made a party to any proceeding by reason of the fact that such person is or was a director or officer of us or is or was serving at our request as a director, officer or trustee of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise to the fullest extent permitted by the DGCL.

In addition, we have entered into indemnification agreements with each of our directors and with certain of our executive officers. Pursuant to the indemnification agreements, we have agreed to indemnify and hold harmless these directors and officers to the fullest extent permitted by the DGCL. The agreements generally cover expenses that a director or officer incurs or amounts that a director or officer becomes obligated to pay because of any proceeding to which he or she is made or threatened to be made a party or participant by reason of his or her service as a current or former director, officer, employee or agent of the Company. The agreements also provide for the advancement of expenses to the directors and officers subject to specified conditions. There are certain exceptions to our obligation to indemnify the directors and officers, including any intentional malfeasance or act where the director or officer did not in good faith believe he or she was acting in our best interests, with respect to "short-swing" profit claims under Section 16(b) of the 1934 Act and, with certain exceptions, with respect to proceedings that he or she initiates.

Section 145 of the DGCL also empowers a corporation to purchase insurance for its officers and directors for such liabilities. We maintain liability insurance for our officers and directors.

#### UNDERWRITING

We have entered into an underwriting agreement dated , 2017 with Maxim Group LLC as the representative of the underwriters (the "representative") named below and the lead book-running manager of this offering. Subject to the terms and conditions of the underwriting agreement, the underwriters have agreed to purchase the number of our securities set forth opposite its name below.

<b>Underwriters</b>	<b>Number of Shares</b>	<b>Number of Pre-funded Warrants</b>
Maxim Group LLC		
Total		



The underwriting agreement provides that the obligations of the underwriters to pay for and accept delivery of the shares of our common stock and/or pre-funded warrants to purchase shares of our common stock are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock and/or pre-funded warrants to purchase shares of our common stock offered hereby if any of such securities are purchased.

We have granted the underwriters an over-allotment option. This option, which is exercisable for up to 45 days after the date of this prospectus, permits the underwriters to purchase up to shares of common stock at a price of \$ per share exercisable for up to shares of common stock from us to cover over-allotments, if any.

The underwriters have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority.

#### **Underwriting Commissions and Discount and Expenses**

We have agreed to pay the underwriters a cash fee equal to 7.5% of the gross proceeds raised in this offering; provided, that, in the event an investor is introduced by us (“Company Investor(s)”), such cash fee shall be reduced to four percent (4.0%) solely with respect to any and all proceeds received by a Company Investor. Notwithstanding the foregoing, it is understood and agreed that the maximum aggregate gross proceeds that Company Investors may invest is capped at 5% of the final aggregate size of this offering. The representative of the underwriters, Maxim Group LLC, has advised us that the underwriters propose to offer the shares of common stock directly to the public at the public offering price set forth on the cover of this prospectus. After the offering to the public, the offering price and other selling terms may be changed by the representative without changing the proceeds we will receive from the underwriters.

The following table summarizes the public offering price, underwriting commissions and proceeds before expenses to us assuming both no exercise and full exercise of the underwriters’ option to purchase additional shares of common stock and/or warrants. The underwriting commissions are equal to the public offering price per share less the amount per share the underwriters pay us for the shares.

	<b>Per Share</b>	<b>Per Pre-Funded Warrant</b>	<b>Total Per Share</b>	<b>Total Pre-Funded Warrant</b>
Public offering price	\$	\$	\$	\$
Underwriting discount to be paid to the underwriters by us	\$	\$	\$	\$
Proceeds to us (before expenses)	\$	\$	\$	\$

We have also agreed to issue to the Representative warrants to purchase a number of common shares equal to an aggregate of 4% of the total number of shares of common stock sold in this offering. The warrants will have an exercise price equal to 120% of the public offering price in this offering and may be exercised on a cashless basis. The warrants are not exercisable for six (6) months after the effective date of the registration statement of which this prospectus forms a part and will expire five (5) years after such date. The warrants may not be sold, transferred, assigned, pledged or hypothecated for a period of six (6) months following the effective date, except that they may be assigned, in whole or in part, to any successor, officer or partner of Maxim (or to officers or partners of any such successor), and to members of the underwriting syndicate or selling group in compliance with FINRA Rule 5110(g). The warrants also provide for one demand registration of the common shares underlying the warrants at our expense, an additional demand at the warrant holder's expense and unlimited "piggyback" registration rights at our expense with respect to the underlying common shares during the one year period commencing on the date of effectiveness of the registration statement of which this prospectus forms a part. The warrants will provide for standard anti-dilution protection in accordance with FINRA Rule 5110(f)(2)(G).

We estimate the total expenses payable by us for this offering to be approximately \$            which amount includes (i) the underwriting discount of \$            (\$            if the underwriters' over-allotment option is exercised in full) and (ii) reimbursement of the accountable expenses of the representative up to a maximum of \$100,000 including the legal fees of the representative being paid by us, regardless of whether the offering is consummated, and (iii) other estimated company expenses of approximately \$            which includes legal, accounting, printing costs and various fees associated with the registration and listing of our shares. We provided an advance of \$20,000 to the representative for its anticipated out-of-pocket expenses related to this offering; the representative will return any portion of the advance not offset by actual expenses. The securities we are offering are being offered by the underwriters subject to certain conditions specified in the underwriting agreement.

### **Over-allotment Option**

We have granted to the underwriters an option exercisable not later than 45 days after the date of this prospectus to purchase up to a number of additional shares of common stock not to exceed 15% of the number of shares of common stock sold in the offering at the public offering price per share of common stock set forth on the cover page hereto less the underwriting discounts and commissions. The underwriters may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional shares of common stock are purchased pursuant to the over-allotment option, the underwriters will offer these shares of common stock on the same terms as those on which the other securities are being offered.

### **Determination of Offering Price**

Our common stock is currently traded on The Nasdaq Capital Market under the symbol "IDXG." On May 17, 2017 the closing price of our common stock was \$2.35 per share.

There is a material disparity between the offering price of the shares of our common stock being offered under this prospectus and the market price of the common stock at the date of this prospectus. We believe that the market price of our common stock at the date of this prospectus is not the appropriate offering price for the shares of our common stock because the market price is affected by a number of factors. The public offering price was determined by negotiation by us and Maxim Group LLC as representative of the underwriters. The principal factors considered by us and the representative in determining the public offering price included:

- the recent trading history of our common stock on the Nasdaq Capital Market, including market prices and trading volume of our common stock;
- the current market price of our common stock on the Nasdaq Capital Market;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies;
- the information set forth or incorporated by reference in this prospectus and otherwise available to the representative;
- our past and present financial performance and an assessment of our management;
- our prospects for future earnings and the present state of our products;
- the current status of commercialized molecular diagnostic tests and product developments by our competitors;
- our history and prospects, and the history and prospects of the industry in which we compete;
- the general condition of the securities markets at the time of this offering; and
- other factors deemed relevant by the representative and us.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the shares of common stock sold in this offering. That price is subject to change as a result of market conditions and other factors and we cannot assure you that the shares of common stock sold in this offering can be resold at or above the public offering price.

### **Lock-up Agreements**

Our officers and directors, representing 3% of our outstanding shares, are expected to agree with the representative to be subject to a lock-up period of 180 days following the closing of this offering. This means that, during the applicable lock-up period, such persons may not offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock. Certain limited transfers are permitted during the lock-up period if the transferee agrees to these lock-up restrictions. We have also agreed, in the underwriting agreement, to similar lock-up restrictions on the issuance and sale of our securities for 180 days following the closing of this offering, although we will be permitted to issue stock options or stock awards to directors, officers and employees under our existing plans. The lock-up period is subject to an additional extension to accommodate for our reports of financial results or material news releases. The representative may, in its sole discretion and without notice, waive the terms of any of these lock-up agreements.

### **Subsequent Equity Sales**

Subject to certain exceptions, until thirty (30) days following the date hereof, neither we nor any of our subsidiaries may issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of common stock or common stock equivalents. In addition, until thirty (30) days following the date hereof, we are prohibited from effecting or entering into an agreement to effect any issuance by us or any of our subsidiaries of common stock or common stock equivalents (or a combination of units thereof) involving a variable rate transaction (as defined in the underwriting agreement).

We have also granted Maxim Group LLC a right of first refusal to act as lead placement agent and/or lead managing underwriter for any and all of our (or any of our subsidiaries') future public or private equity, equity-linked offering (excluding strategic investor financings, mergers and acquisitions, commercial debt, lines of credit, and equipment financings), with a minimum seventy percent (70%) of the economics in such subsequent offering(s).

### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

### **Price Stabilization, Short Positions and Penalty Bids**

In connection with this offering, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock. Specifically, the underwriters may over-allot in connection with this offering by selling more shares of common stock than are set forth on the cover page of this prospectus. This creates a short position in our common stock for the underwriters' own account. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares of common stock over-allotted by the underwriters is not greater than the number of shares of common stock that they may purchase in the over-allotment option. In a naked short position, the number of shares of common stock involved is greater than the number of shares of common stock in the over-allotment option. To close out a short position, the underwriters may elect to exercise all or part of the over-allotment option. The underwriters may also elect to stabilize the price of our common stock or reduce any short position by bidding for, and purchasing, common stock in the open market.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter or dealer repays selling concessions allowed to it for distributing a security in this offering because the underwriter repurchases that security in stabilizing or short covering transactions.

Finally, the underwriters may bid for, and purchase, shares of our common stock in market making transactions, including “passive” market making transactions as described below.

These activities may stabilize or maintain the market price of our common stock at a price that is higher than the price that might otherwise exist in the absence of these activities. The underwriters are not required to engage in these activities, and may discontinue any of these activities at any time without notice. These transactions may be effected on The Nasdaq Capital Market, in the over-the-counter market, or otherwise.

In connection with this offering, the underwriters and selling group members, if any, or their affiliates may engage in passive market making transactions in our common stock immediately prior to the commencement of sales in this offering, in accordance with Rule 103 of Regulation M under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Rule 103 generally provides that:

- a passive market maker may not effect transactions or display bids for our common stock in excess of the highest independent bid price by persons who are not passive market makers;
- net purchases by a passive market maker on each day are generally limited to 30% of the passive market maker’s average daily trading volume in our common stock during a specified two-month prior period or 200 shares of common stock, whichever is greater, and must be discontinued when that limit is reached; and
- passive market making bids must be identified as such.

### **Our Relationships with the Underwriters**

The underwriters and their affiliates have engaged, and may in the future engage, in investment banking transactions and other commercial dealings in the ordinary course of business with us or our affiliates. The underwriters and their affiliates have received, or may in the future receive, customary fees and commissions for these transactions. Maxim Group LLC acted as the placement agent in connection with the registered direct offerings completed on December 22, 2016, January 6, 2017 and January 25, 2017 and the Private Placement completed concurrently with the January 25, 2017 offering. In its role as placement agent, Maxim Group LLC received an aggregate of \$815,380 in placement agent fees. Additionally, in connection with the registered direct offering in December 22, 2016 (the “Registered Direct Offering”), we granted Maxim Group LLC a right of first refusal to act as lead managing underwriter and book runner for any and all future public and private equity and debt offerings of ours for a period of twelve (12) months from the closing of the Registered Direct Offering ending on December 22, 2017.

On February 8, 2017, we completed the CMPO, to sell 1,200,000 shares of its common stock at a price of \$3.00 per share. In addition, we granted the underwriters an option to purchase up to an additional 108,000 shares of our common stock, solely for the purpose of covering over-allotments, if any. The underwriters exercised the over-allotment option in full. The CMPO resulted in gross proceeds to us of approximately \$3.9 million, and a placement agency fee to Maxim Group LLC of approximately \$313,920.

In connection with the exchange offer of our non-convertible notes for convertible notes and their subsequent conversion into common stock described in *Recent Business Developments-Note Exchange and Subsequent Conversion*, we paid Maxim Group LLC a cash placement fee of \$726,513.

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

#### **Indemnification**

We have agreed to indemnify the underwriters against liabilities relating to the offering arising under the Securities Act and the Exchange Act, liabilities arising from breaches of some or all of the representations and warranties contained in the underwriting agreement, and to contribute to payments that the underwriters may be required to make for these liabilities.

The underwriting agreement will be filed as an exhibit to our Current Report on Form 8-K to be filed with the SEC in connection with this offering.

#### **Electronic Distribution**

A prospectus in electronic format may be made available on a website maintained by the representative of the underwriters and may also be made available on a website maintained by other underwriters. The underwriters may agree to allocate a number of shares to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives of the underwriters to underwriters that may make Internet distributions on the same basis as other allocations. In connection with the offering, the underwriters or syndicate members may distribute prospectuses electronically. No forms of electronic prospectus other than prospectuses that are printable as Adobe® PDF will be used in connection with this offering.

The underwriters have informed us that they do not expect to confirm sales of shares of common stock offered by this prospectus to accounts over which they exercise discretionary authority.

Other than the prospectus in electronic format, the information on any underwriter's website and any information contained in any other website maintained by an underwriter is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or any underwriter in its capacity as underwriter and should not be relied upon by investors.

#### **Foreign Regulatory Restrictions on Purchase of Securities Offered Hereby Generally**

No action has been or will be taken in any jurisdiction (except in the United States) that would permit a public offering of the securities offered by this prospectus, or the possession, circulation or distribution of this prospectus or any other material relating to us or the securities offered hereby in any jurisdiction where action for that purpose is required. Accordingly, the securities offered hereby may not be offered or sold, directly or indirectly, and neither of this prospectus nor any other offering material or advertisements in connection with the securities offered hereby may be distributed or published, in or from any country or jurisdiction except in compliance with any applicable rules and regulations of any such country or jurisdiction.

Each of the underwriters may arrange to sell securities offered by this prospectus in certain jurisdictions outside the United States, either directly or through affiliates, where they are permitted to do so.

#### **LEGAL MATTERS**

Certain legal matters relating to the issuance of the securities offered by this prospectus will be passed upon for us by Pepper Hamilton LLP, New York, New York. Certain legal matters in connection with this offering will be passed upon for the underwriter by Ellenoff Grossman & Schole LLP, New York, New York.

#### **EXPERTS**

The financial statements and schedules as of December 31, 2016 and 2015 and for each of the two years in the period ended December 31, 2016 incorporated by reference in this Prospectus and in the Registration Statement have been so included in reliance on the reports of BDO USA, LLP, an independent registered public accounting firm (the report on the financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern) incorporated by reference, given on the authority of said firm as experts in auditing and accounting.

#### **WHERE YOU CAN FIND MORE INFORMATION**

We have filed a registration statement on Form S-1 with the SEC covering the securities we are offering by this prospectus. This prospectus does not include all of the information contained in the registration statement. You should refer to the registration statement and its exhibits for additional information. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, the references are not necessarily complete and you should refer to the exhibits filed as part of the registration statement for copies of the actual contract, agreement or other document.

We file annual, quarterly and other periodic reports, proxy statements and other information with the Securities and Exchange Commission. You can read our Securities and Exchange Commission filings, including this registration statement, over the Internet at the Securities and Exchange Commission's website at [www.sec.gov](http://www.sec.gov). You may also read and copy any document we file with the Securities and Exchange Commission at its public reference facilities at 100 F Street NE, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the Securities and Exchange Commission at 100 F Street NE, Washington, D.C. 20549. Please call the Securities and Exchange Commission at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

Our Internet address is [www.interpcediagnostics.com](http://www.interpcediagnostics.com). There we make available free of charge, on or through the investor relations section of our website, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with the Securities and Exchange Commission. The information found on our website is not part of this prospectus and investors should not rely on any such information in deciding whether to invest.

#### **INCORPORATION OF CERTAIN INFORMATION BY REFERENCE**

We have elected to incorporate the following documents into this prospectus, together with all exhibits filed therewith or incorporated therein by reference, to the extent not otherwise amended or superseded by the contents of this prospectus:

- our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017, as filed with the SEC on May 12, 2017;
- our Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the SEC on March 31, 2017;
- our Annual Report on Form 10-K/A for the year ended December 31, 2016, as filed with the SEC on April 28, 2017; and
- our Current Reports on Form 8-K or Form 8-K/A filed with the SEC on January 3, 2017, January 5, 2017, January 6, 2017, January 20, 2017, January 25, 2017, February 3, 2017, March 23, 2017, March 27, 2017, April 3, 2017, April 13, 2017 April 18, 2017, and May 15, 2017, excluding any portions of any Current Report on Form 8-K or Form 8-K/A that are not deemed "filed" pursuant to the General Instructions of Form 8-K.



In addition, we incorporate by reference in this prospectus any future filings we make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act (excluding any information furnished and not filed with the SEC) after the date on which the registration statement that includes this prospectus was initially filed with the SEC (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) and until all offerings under this prospectus are terminated.

Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for all purposes to the extent that a statement contained in this prospectus, or in any other subsequently filed document which is also incorporated or deemed to be incorporated by reference, modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. You may request a copy of these filings (other than an exhibit to a filing unless that exhibit is specifically incorporated by reference into that filing) at no cost by writing or telephoning us at the following address or telephone number:

Interpace Diagnostics Group, Inc.  
Morris Corporate Center I, Building A  
300 Interpace Parkway, Parsippany, NJ 07054  
(855) 776-6419

Copies of these filings are also available through the “Investors” section of our website at [www.interpacediagnostics.com](http://www.interpacediagnostics.com). For other ways to obtain a copy of these filings, please refer to “Prospectus Summary—Available Information.”



**Shares of Common Stock  
Pre-funded Warrants to Purchase Shares of Common Stock**

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**PROSPECTUS**

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**Maxim Group LLC**

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**May , 2017**

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## PART II

### Information Not Required in Prospectus

#### ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the fees and expenses, other than placement agent fees and expenses, payable in connection with the registration of the common stock hereunder. All amounts are estimates except the SEC registration fee and the FINRA filing fee.

<b>Item</b>	<b>Amount to be paid</b>
SEC registration fee	\$
FINRA filing fee	
Printing expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer Agent fees and expenses	*
Miscellaneous expenses	*
Total	*

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\* To be completed by amendment.

#### ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Our Certificate of Incorporation, as amended and as may be further amended and in effect from time to time, which we refer to as the amended certificate of incorporation, provides that our directors shall not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability for breach of the director's duty of loyalty to us or our stockholders, for acts or omissions not in good faith or involving intentional misconduct or a knowing violation of law, for payment of dividends or approval of stock purchases or redemptions that are prohibited by the General Corporation Law of the State of Delaware, as amended, which we refer to as the DGCL, or for any transaction from which the director derived an improper personal benefit. Under the DGCL, our directors have a fiduciary duty to us that is not eliminated by this provision of the amended certificate of incorporation and, in appropriate circumstances, equitable remedies such as injunctive or other forms of non-monetary relief will remain available. This provision also does not affect our directors' responsibilities under any other laws, such as federal securities laws or state or federal environmental laws.

Section 145 of the DGCL empowers a corporation to indemnify its directors and officers against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by them in connection with any action, suit or proceeding brought by third parties by reason of the fact that they were or are directors or officers of the corporation, if they acted in good faith, in a manner they reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe that their conduct was unlawful. The DGCL provides further that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which the directors and officers may be entitled under the corporation's bylaws, any agreement, a vote of stockholders or otherwise. The amended certificate of incorporation provides that, to the fullest extent permitted by Section 145 of the DGCL, we shall indemnify any person who is or was a director or officer of us, or is or was serving at our request as a director, officer or trustee of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, against the expenses, liabilities or other matters referred to in or covered by Section 145 of the DGCL. Our amended and restated bylaws provide that we will indemnify any person who was or is a party or threatened to be made a party to any proceeding by reason of the fact that such person is or was a director or officer of us or is or was serving at our request as a director, officer or trustee of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise to the fullest extent permitted by the DGCL. In addition, we have entered into agreements with each of our directors and officers under which, among other things, we have agreed to indemnify the director or officer against expenses incurred in any proceeding, including any action by us, in which the director or officer was, is or is threatened to be made a party or a participant by reason of his or her status as a present or former director, officer, employee or agent of us or, at our request, any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise. At present, there is no pending litigation or proceeding involving any director or officer as to which indemnification will be required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for such indemnification.

Section 145 of the DGCL also empowers a corporation to purchase insurance for its officers and directors for such liabilities. We maintain liability insurance for our officers and directors.

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## ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

The following summarizes the securities that we sold within the past three years without registering the securities under the Securities Act. All of these sales were made in reliance on the exemption from registration provided by Section 4(a)(2) of the Securities Act of 1933, as amended.

On October 31, 2014, we issued an interest-free Note to RedPath Equityholder Representative, LLC (the "Equityholder Representative"), on behalf of the equityholders of RedPath (the "Equityholders"), at the closing of the Agreement and Plan of Merger (the "Agreement"), dated October 31, 2014, to acquire RedPath Integrated Pathology, Inc. ("RedPath") for \$11.0 million to be paid in eight equal consecutive quarterly installments beginning October 1, 2016. We also entered into the Contingent Consideration Agreement with the Equityholder Representative. We agreed to issue to the Equityholders 500,000 shares of our common stock, par value \$0.01, upon acceptance for publication of a specified article related to PathFinderTG ® for the management of Barrett's esophagus, and an additional 500,000 shares of the Company's Common Stock upon the commercial launch of PathFinderTG ® for the management of Barrett's esophagus.

On January 20, 2017, we entered into a placement agency agreement with Maxim Group LLC in connection with the registered direct public offering of 855,000 shares of our common stock, par value \$0.01 per share. In a concurrent private placement, we agreed to sell through Maxim Group LLC as placement agent warrants to purchase 855,000 shares of common stock (the "Concurrent Warrants") with an exercise price of \$4.69 per Concurrent Warrant. The combined purchase price for one common share and one Concurrent Warrant was \$4.69.

In March 29, 2017 we agreed to issue 5-year warrants for an aggregate 100,000 shares of our common stock at a exercise price of \$4.69 to the former RedPath equity shareholders (our former secured creditors) in exchange for the termination of future royalty and milestone payments related to sales of certain of our products arising out of our acquisition of Redpath Integrated Pathology Inc. in October 2014.

On April 18, 2017, we entered into an amendment and exchange agreement with an institutional investor, and agreed to exchange \$3,547,775 of our senior secured note, dated March 23, 2017, for \$3,547,775 of our senior secured convertible note, dated April 18, 2017. The senior secured convertible note is identical in all material respects to our senior secured convertible note dated March 23, 2017 except for the initial conversion price and requiring stockholder approval to adjust the conversion price or the right to substitute the variable price for the conversion price, which provisions have been waived by the investor. The initial conversion price of the senior secured convertible note was \$2.20.

Between March 23, 2017 and April 18, 2017, we issued 3,795,429 shares of our common stock upon conversion of our senior secured convertible notes. As a result, the outstanding amount of our senior secured convertible notes was reduced to zero.

Date of Conversion	Amount of Senior Secured Convertible Note so converted	Shares of company stock issued	Conversion price per share
March 23, 2017	\$ 122,000	50,000	\$ 2.44
March 28, 2017	25,000	10,248	2.44
March 29, 2017	1,275,000	522,648	2.44
March 30, 2017	2,799,663	1,147,638	2.44
April 3, 2017	200,000	81,992	2.44
April 18, 2017	900,000	369,126	2.44
April 18, 2017	3,547,775	1,613,777	2.20
Totals	\$ 8,869,438	3,795,429	

## ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

See the Exhibit Index included following the signature page of this registration statement.

## ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, or the Act, may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is therefore unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
    - (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
    - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
    - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;
  - (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
  - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
  - (4) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
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(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(5) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(6) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Parsippany, State of New Jersey, on May 22, 2017.

### INTERPACE DIAGNOSTICS GROUP, INC.

By: /s/ Jack E. Stover

Jack E. Stover  
President and Chief Executive Officer

### SIGNATURES AND POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Jack E. Stover and James Early, and each of them severally, as his true and lawful attorney-in-fact and agent, each acting alone with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign this Registration Statement on Form S-1 to be filed in connection with the offering of securities of Interpace Diagnostics Group, Inc., and any and all amendments (including post-effective amendments) to this registration statement, and any subsequent registration statement filed pursuant to Rule 462 under the Securities Act of 1933, as amended, and to file the same with exhibits thereto, and the other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, each acting alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as they might or could do in person, hereby ratifying and confirming all that said attorney-in-fact or his substitutes, each acting alone, may lawfully do or cause to be done by virtue thereof.

IN WITNESS WHEREOF, each of the undersigned has executed this Power of Attorney as of the date indicated. Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and as of the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Jack E. Stover</u> Jack E. Stover	President, Chief Executive Officer, and Director (Principal Executive Officer)	May 22, 2017
<u>/s/ James E. Early</u> James E. Early	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	May 22, 2017
<u>/s/ Joseph Keegan, Ph.D.</u> Joseph Keegan, Ph.D.	Director	May 22, 2017
<u>/s/ Stephen J. Sullivan</u> Stephen J. Sullivan	Director	May 22, 2017

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## EXHIBIT INDEX

<b>Exhibit Number</b>	<b>Description</b>
1.1†	Form of Underwriting Agreement
2.1*	Asset Purchase Agreement, dated August 13, 2014, by and between Interpace Diagnostics, LLC and Asuragen, Inc., incorporated by reference to the designated exhibit of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, filed with the SEC on November 5, 2014
2.2*	Agreement and Plan of Merger, dated October 31, 2014, by and among RedPath Integrated Pathology, Inc., the Company, Interpace Diagnostics, LLC, RedPath Acquisition Sub, Inc. and RedPath Equityholder Representative, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
2.3*	Asset Purchase Agreement, dated as of October 30, 2015, by and between Publicis Touchpoint Solutions, Inc. and PDI, Inc. is incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the SEC on November 2, 2015
3.1*	Certificate of Incorporation of PDI, Inc. (n.k.a. Interpace Diagnostics Group, Inc.), incorporated by reference to the designated exhibit of the Company's Registration Statement on Form S-1 (File No. 333-46321), filed with the SEC on May 19, 1998
3.2*	Certificate of Amendment of Certificate of Incorporation of PDI, Inc. (n.k.a. Interpace Diagnostics Group, Inc.), incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2001, filed with the SEC on March 13, 2002
3.3*	Certificate of Amendment to the Certificate of Incorporation of PDI, Inc. (n.k.a. Interpace Diagnostics Group, Inc.), incorporated by reference to the designated exhibit of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, filed with the SEC on August 14, 2012
3.4*	Amended and Restated By-Laws of PDI, Inc. (n.k.a. Interpace Diagnostics Group, Inc.), incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2013, filed with the SEC on March 6, 2014
3.5*	Certificate of Amendment to the Certificate of Incorporation of PDI, Inc. (n.k.a. Interpace Diagnostics Group, Inc.), incorporated by reference to the designated exhibit of the Company's Form 8-K filed with the SEC on December 23, 2015
3.6*	Certificate of Amendment to the Certificate of Incorporation of PDI, Inc. (n.k.a. Interpace Diagnostics Group, Inc.), incorporated by reference to the designated exhibit of the Company's Form 8-K filed with the SEC on December 23, 2015
3.7*	Certificate of Amendment to the Certificate of Incorporation of Interpace Diagnostics Group, Inc., incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on December 28, 2016
3.8*	Form of Warrant to Purchase Stock of Interpace Diagnostics Group, Inc., issued to purchasers of convertible promissory notes (incorporated by reference to Exhibit 4.5 to the Company's Form 10-K, filed with the SEC on March 9, 2016)
4.1*	Specimen Certificate Representing the Common Stock, incorporated by reference to the designated exhibit of the Company's Registration Statement on Form S-1 (File No. 333-46321), filed with the SEC on May 19, 1998



- 4.2\* Form of Prepaid Common Stock Purchase Warrant, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on December 19, 2016
- 4.3† Form of Pre-Funded Warrant
- 5.1† Opinion of counsel with respect to the legality of the securities being registered
- 10.1\*\* 2000 Omnibus Incentive Compensation Plan, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on October 20, 2014
- 10.2\*\* Executive Deferred Compensation Plan, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2009, filed with the SEC on March 8, 2010
- 10.3\*\* Amended and Restated 2004 Stock Award and Incentive Plan, incorporated by reference to the designated exhibit of the Company's definitive proxy statement filed with the SEC on April 28, 2004
- 10.4\*\* Form of Restricted Stock Unit Agreement for Employees, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2008, filed with the SEC on March 8, 2009
- 10.5\*\* Form of Stock Appreciation Rights Agreement for Employees, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2008, filed with the SEC on March 8, 2009
- 10.6\*\* Form of Restricted Stock Unit Agreement for Directors, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2008, filed with the SEC on March 8, 2009
- 10.7\*\* Form of Restricted Share Agreement, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2009, filed with the SEC on March 8, 2010
- 10.8\*\* Offer Letter between the Company and Graham G. Miao, dated October 14, 2014, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on October 20, 2014
- 10.9\*\* Employment Separation Agreement between the Company and Graham G. Miao, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on October 20, 2014
- 10.10\*\* Confidential Information, Non-Disclosure, Non-Competition, Non-Solicitation and Rights to Intellectual Property Agreement between the Company and Graham G. Miao, dated October 14, 2014, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on October 20, 2014
- 10.11\*\* Form of Restricted Stock Unit Inducement Agreement, by and between the Company and Graham G. Mio, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on October 20, 2014
- 10.12\*\* Stock Appreciation Rights Inducement Agreement by and between the Company and Graham G. Miao, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on October 20, 2014
- 10.13\* Morris Corporate Center Lease, incorporated by reference to the designated exhibit of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2009, filed with the SEC on November 5, 2009
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- 10.14\* Non-negotiable Subordinated Secured Promissory Note, dated October 31, 2014, by the Company and Interpace Diagnostics, LLC in favor of RedPath Equityholder Representative, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.15\* Amendment No. 1 to Note, dated July 30, 2015, by and between Redpath Equityholder Representative, LLC, a Delaware limited liability company, and the Company, incorporated by reference to the designated exhibit of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015, filed with the SEC on November 12, 2015
- 10.16\* Limited Waiver, Consent and Amendment No. 2 to Note, dated October 30, 2015, by and among RedPath Equityholder Representative, LLC, PDI, Inc., and Interpace Diagnostics, LLC, incorporated by reference to the designated exhibit of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015, filed with the SEC on November 12, 2015
- 10.17\* Contingent Consideration Agreement, dated October 31, 2014, by and among the Company, Interpace Diagnostics, LLC and RedPath Equityholder Representative, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.18\* Settlement Agreement, dated January 28, 2013, by and between RedPath Integrated Pathology, Inc. (now known as Interpace Diagnostics Corporation) and the United States of America, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.19\* License Agreement, dated August 13, 2014, by and between Interpace Diagnostics, LLC and Asuragen, Inc., incorporated by reference to the designated exhibit of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, filed with the SEC on November 5, 2014
- 10.20\* CPRIT License Agreement, dated August 13, 2014, by and between Interpace Diagnostics, LLC and Asuragen, Inc., incorporated by reference to the designated exhibit of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, filed with the SEC on November 5, 2014
- 10.21\* Supply Agreement, dated August 13, 2014, by and between Interpace Diagnostics, LLC and Asuragen, Inc., incorporated by reference to the designated exhibit of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, filed with the SEC on November 5, 2014
- 10.22\* Guaranty, dated August 13, 2014 by the Company in favor of Asuragen, Inc., incorporated by reference to the designated exhibit of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, filed with the SEC on November 5, 2014
- 10.23\* Lease, dated October 10, 2007, by and between Spring Way Center, LLC and RedPath Integrated Pathology, Inc. (now known as Interpace Diagnostics, LLC), incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.24\* Lease Renewal, dated April 3, 2013, by and between Spring Way Center, LLC and RedPath Integrated Pathology, Inc. (now known as Interpace Diagnostics, LLC), incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
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- 10.25\* Lease, dated June 28, 2015, by and between WE 2 Church Street South LLC and JS Genetics, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.26\* Amendment No. 1 to Lease, dated September 18, 2007, by and between WE 2 Church Street South LLC and JS Genetics, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.27\* Amendment No. 2 to Lease, dated August 29, 2008, by and between WE 2 Church Street South LLC and JS Genetics, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.28\* Amendment No. 3 to Lease, dated April 8, 2009, by and between WE 2 Church Street South LLC and JS Genetics, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.29\* Amendment No. 4 to Lease, dated September 16, 2010, by and between WE 2 Church Street South LLC and JS Genetics, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.30\* Amendment No. 5 to Lease, dated September 15, 2011, by and between WE 2 Church Street South LLC and JS Genetics, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.31\* Amendment No. 6 to Lease, dated March 5, 2014, by and between WE 2 Church Street South LLC and JS Genetics, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.32\* Amendment No. 7 to Lease, dated August 29, 2014, by and between WE 2 Church Street South LLC and JS Genetics, LLC, incorporated by reference to the designated exhibit of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 5, 2015
- 10.33\*\* Amendment Agreement, dated December 7, 2015, by and between PDI, Inc. (n.k.a. Interpace Diagnostics Group, Inc.) and Nancy S. Lurker, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on December 8, 2015
- 10.34\*\* Agreement and General Release, dated January 6, 2016, by and between Gerald Melillo and PDI, Inc. (n.k.a. Interpace Diagnostics Group, Inc.), incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on January 1, 2016
- 10.35\*\* Agreement and General Release, dated January 15, 2016, by and between Nancy S. Lurker and PDI, Inc. (n.k.a. Interpace Diagnostics Group, Inc.), incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K, filed with the SEC on January 22, 2016.
- 10.36\*\* Severance Agreement and General Release, dated March 28, 2016, by and between Graham Miao and Interpace Diagnostics Group, Inc., incorporated by reference the designated exhibit of the Company's Current Report on Form 8-K, filed with the SEC on March 29, 2016.
- 10.37\*\* Employment Separation Agreement between Interpace Diagnostics Group, Inc. and Nat Krishnamurti, effective as of June 22, 2016, incorporated by reference to the designated exhibit of Amendment No. 2 to the Company's Current Report on Form 8-K filed with the SEC on June 22, 2016.
- 10.38\*\* Confidential Information, Non-Disclosure, Non-Solicitation, Non-Compete and Rights to Intellectual Property Agreement between Interpace Diagnostics Group, Inc. and Nat Krishnamurti, dated as of June 22, 2016, incorporated by reference to the designated exhibit of Amendment No. 2 to the Company's Current Report on Form 8-K filed with the SEC on June 22, 2016.
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- 10.39\*\* Form of Indemnification Agreement by and between Interpace Diagnostics Group, Inc. and its directors and executive officers, incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on August 8, 2016.
- 10.40\* Credit Agreement and Security Agreement, dated as of September 28, 2016, by and among Interpace Diagnostics Group, Inc., Interpace Diagnostics Corporation, Interpace Diagnostics, LLC and SCM Specialty Finance Opportunities Fund, L.P., incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on October 4, 2016.
- 10.41\* Intercreditor Agreement, dated as of September 28, 2016, by and between SCM Specialty Finance Opportunities Fund, L.P. and RedPath Equityholder Representative, LLC and acknowledged and agreed to by Interpace Diagnostics Group, Inc., Interpace Diagnostics, LLC and Interpace Diagnostics Corporation, incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on October 4, 2016.
- 10.42\* Third Amendment to Non-Negotiable Subordinated Secured Promissory Note, dated as of September 30, 2016, by and among Interpace Diagnostics Group, Inc., Interpace Diagnostics, LLC and RedPath Equityholder Representative, LLC, incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on October 4, 2016.
- 10.43\* Management Engagement Letter, effective as of October 11, 2016, by and between Early Financial Consulting, LLC and Interpace Diagnostics Group, Inc., incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on October 14, 2016.
- 10.44\*\* Incentive Stock Option Agreement between Interpace Diagnostics Group, Inc. and Jack E. Stover, incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on October 20, 2016.
- 10.45\*\* Incentive Stock Option Agreement between Interpace Diagnostics Group, Inc. and James Early, incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on October 20, 2016.
- 10.46\*\* Form of Incentive Stock Option Agreement, incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on October 20, 2016.
- 10.47\* Fourth Amendment to Non-Negotiable Subordinated Secured Promissory Note, dated as of October 31, 2016, by and among Interpace Diagnostics Group, Inc., Interpace Diagnostics, LLC and RedPath Equityholder Representative, LLC, incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on November 3, 2016.
- 10.48\*\* Employment Agreement, dated as of October 28, 2016, by and between Interpace Diagnostics Group, Inc. and Jack E. Stover, incorporated by reference to the designated exhibit to the Company's Current Report on Form 8-K filed with the SEC on November 3, 2016.
- 10.49\* Fifth Amendment to Non-Negotiable Subordinated Secured Promissory Note, dated as of November 16, 2016, by and among Interpace Diagnostics Group, Inc., Interpace Diagnostics, LLC and RedPath Equityholder Representative, LLC, incorporated by reference to the designated exhibit to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 17, 2016.
- 10.50\* Placement Agency Agreement by and between Interpace Diagnostics Group, Inc. and Maxim Group, LLC, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on December 19, 2016
- 10.51\* Form of Securities Purchase Agreement by and between Interpace Diagnostics Group, Inc. and certain purchasers named therein, incorporated by reference to the designated exhibit of the Company's Current Report on Form 8-K filed with the SEC on December 19, 2016
- 21.1 † Subsidiaries of the Registrant
- 23.1 \*\*\* Consent of BDO USA LLP, Independent Registered Public Accounting Firm
- 23.2 † Consent of Pepper Hamilton LLP (included in Exhibit 5.1)
- 24.1 \*\*\* Power of Attorney (included as part of the signature pages hereto)

\* Previously filed.

\*\* Indicates a management contract or compensatory plan or arrangement.

\*\*\* Filed herewith.

† To be filed by amendment



Consent of Independent Registered Public Accounting Firm

Interpace Diagnostics Group, Inc.  
Parsippany, New Jersey

We hereby consent to the use in the Prospectus constituting a part of this Registration Statement of our report dated March 31, 2017, relating to the consolidated financial statements and schedules of Interpace Diagnostics Group, Inc., which is incorporated by reference in that Prospectus. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

BDO USA, LLP  
Woodbridge, New Jersey  
May 22, 2017

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