TRANSGENOMIC INC
Form 10-K/A
August 21, 2015

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K/A

(Amendment No. 2)

(Mark One)

ý **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2014

OR

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number 000-30975

TRANSGENOMIC, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**91-1789357**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification Number)

12325 Emmet Street

Omaha, NE 68164

(Address of Principal Executive Offices) (Zip Code)

(402) 452-5400

(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	**Name of Each Exchange On Which Registered**
Common Stock, par value $0.01 per share	The NASDAQ Capital Market

Securities registered pursuant to Section 12(g) of the Act:

None

(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes ¨ No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.

Yes ¨ No x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes ¨ No x

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K x

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

Large Accelerated Filer ¨	Accelerated Filer ¨
Non-Accelerated Filer ¨ (Do not check if a smaller reporting company)	Smaller Reporting Company x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ¨ No x

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant based on the last reported closing price per share of Common Stock as reported on the NASDAQ Capital Market on the last business day of the registrant's most recently completed second quarter was approximately $24.6 million.

At March 31, 2015, the registrant had 11,857,078 shares of common stock outstanding.

EXPLANATORY NOTE

This Amendment No. 2 to Annual Report on Form 10-K/A (this "Second Amendment") is being filed by Transgenomic, Inc. (the "Company") to amend the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2014, which was originally filed with the Securities and Exchange Commission (the "SEC") on April 15, 2015 (the "Original Form 10-K"), as amended by the Company's Amendment No. 1 to Annual Report on Form 10-K/A, which was filed with the SEC on August 14, 2015 (the "First Amendment").

The Company is filing this Second Amendment for the purpose of updating the biographical information for Paul Kinnon that was included under the heading "Executive Officers of the Registrant" under Part I, "Item 1. Our Business" of the Original Form 10-K. The Company is also filing this Second Amendment for the purpose of updating the biographical information for Paul Kinnon that was included under Part III, "Item 10. Directors, Executive Officers and Corporate Governance" of the Original Form 10-K through the incorporation by reference of information in the Company's definitive proxy statement on Schedule 14A filed with the SEC on April 30, 2015.

In addition, as required by Rule 12b-15 promulgated under the Securities Exchange Act of 1934, as amended ("Rule 12b-15"), a new certification by the Company's principal executive officer and principal financial officer is filed herewith as an exhibit to this Second Amendment.

The information under Part I, "Item 1. Our Business" of the Original Form10-K is hereby amended and restated in its entirety to read as follows:

"**Item 1Our Business**

Transgenomic, Inc. ("we", "us", "our", the "Company" or "Transgenomic") is a global biotechnology company advancing personalized medicine for the detection and treatment of cancer and inherited diseases through its proprietary molecular technologies and world-class clinical and research services. A key goal is to bring our Multiplexed ICE COLD-PCR ("MX-ICP") product to the clinical market rapidly through strategic licensing agreements, enabling the use of blood and other bodily fluids for more effective and patient-friendly diagnosis, monitoring and treatment of cancer.

MX-ICP is a simple, proprietary chemistry that amplifies the ability to detect genetic mutations by 100 - 400 fold. This chemistry has been validated internally on all currently available sequencing platforms, including Sanger, Next Gen Sequencing and Digital PCR. By enhancing the level of detection of genetic mutations and suppressing the normal, "wild-type" DNA, several benefits are provided. It is generally understood that most current technologies are

unable to consistently identify mutations that occur in less than approximately 5% of a sample. However, many mutations found at much lower levels, even down to 0.01% are known to be clinically relevant and can have significant consequences to a patient: both in terms of how they will respond to a given drug or treatment and how a given tumor is likely to change over time. More importantly, in our view, significantly improving the level of detection while using blood, saliva and even urine as a source for DNA, rather than depending on painful, expensive and potentially dangerous tumor biopsies, is an important advancement in patient care with respect to cancer detection, treatment and monitoring of the disease and can result in significant cost savings for the healthcare system by replacing invasive procedures with the simple collection of blood or other bodily fluid. By broadening the types of samples that can be used for testing and allowing all sequencing platforms to provide improved identification of low level mutations, MX-ICP has the potential to make testing much more patient friendly, enable genetic monitoring of disease progression and more effectively guide treatment protocols, and reduce the overall cost of diagnosis and monitoring while also improving patient outcomes.

Currently, our operations are organized and reviewed by management along major product lines and presented in the following two business segments:

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

- Genetic Assays and Platforms. Our proprietary product in this business segment is the WAVE® System, which has broad applicability to genetic variation detection in both molecular genetic research and molecular diagnostics. We also distribute bio-instruments produced by other manufacturers ("OEM Equipment") through our sales and distribution network. Service contracts to maintain installed systems are sold and supported by our technical support personnel. The installed WAVE base and some OEM Equipment platforms generate a demand for consumables that are required for the continued operation of the bio-instruments. We develop, manufacture and sell these consumable products. In addition, we manufacture and sell consumable products that can be used on multiple, independent platforms. These products include a range of chromatography columns.

Segment information related to revenues, a performance measure of profit, capital expenditures, and total assets is contained in Footnote 15 - "Operating Segment and Geographic Information", to our accompanying consolidated financial statements.

Business Strategy

Our primary objective is to commercialize MX-ICP for the clinical diagnostics market through strategic licensing agreements. MX-ICP facilitates the use of blood and other bodily fluids for the effective and efficient diagnosis and treatment of cancer. It does this by enhancing the level of detection of mutant DNA by 100 - 400 fold. In tumors, mutations can often be found occurring with a frequency of around 5%, which current technologies can readily identify. However, other mutations can be present at much lower frequencies. MX-ICP makes possible 0.1% and even 0.01% levels of detection of mutant DNA. We believe that MX-ICP can help dramatically improve the diagnosis and treatment/monitoring of cancer patients. Using MC-ICP-based tests, clinicians can effectively and economically

monitor a patient's therapy and progress on an ongoing basis. We plan to commercialize this product directly, but more importantly and more immediately, expect to partner with a significant number of life sciences companies to accelerate the adoption and use of the technology.

Our next set of objectives focuses on strengthening a number of our existing businesses. We continue to provide products and services to biomedical researchers, physicians, medical institutions and diagnostic and pharmaceutical companies that are tied to identifying and understanding genetic mutations and variations and their roles in disease. Our products and services help scientists and physicians understand and predict disease and drug response. As medical practitioners learn to correlate specific mutations and patterns of mutation with specific disease states, drug responses and patient outcomes, it becomes possible to optimize a treatment regimen to a specific patient. This is known as personalized or precision medicine.

Our internal estimates for the size of the cancer diagnostics market, based on multiple industry sources, suggests a rapidly growing market with a current annual value of $2.5 billion, built on only tissue biopsies and not accounting for growth due to the potential for liquid biopsies or increased testing to monitoring cancer patients. Growth in this market has been in part fueled by the rapid adoption of Next-Generation Sequencing ("NGS") and Digital PCR, along with an emphasis by the U.S. Food & Drug Administration ("FDA") for better and more uniform compliance regarding Laboratory Designed Test assays. In spite of these changes in the market, there is still a need for more informative data to help guide treatment. We believe that this will only occur when there is a move to blood and liquid testing of cancer patients earlier and more regularly (monitoring) to ensure more accurate diagnoses and more targeted and effective treatments. We believe that MX-ICP is at the forefront of technologies designed to accomplish this transition away from traditional biopsies, analysis and monitoring and will help allow for precision medicine to become a reality.

Transgenomic does not intend to build the extensive infrastructure necessary to fully commercialize MX-ICP. While there are applications of the technology that we will sell directly, we anticipate that the majority of revenues will be generated through a combination of exclusive, non-exclusive or semi-exclusive licenses to partners and collaborators. Our goal is to establish the fastest time to market possible for our product and to leverage already existing infrastructure rather than depend on making significant capital expenditures or other investments of our own. Our potential partners generally fall into one of three categories:

- L**aboratory instrumentation and reagents suppliers** (such as: Thermo Fisher Scientific, Inc., Illumina, Inc., Bio-Rad Laboratories, Inc., Qiagen N.V. and Affymetrix, Inc.). The usefulness of MX-ICP across all platforms and its ability to detect tumor mutations in a wide range of samples make such companies natural partners for Transgenomic. We believe that MX-ICP has the potential to greatly expand the market for cancer monitoring as a complement, not as a competitor, to existing products.

- **Pharmaceutical and Biotechnology companies** (such as: Amgen, Inc., Novartis AG, Clovis Oncology, Inc., AstraZeneca plc, GlaxoSmithKline plc and Bristol-Myers Squibb Company). For companies developing new cancer drugs, MX-ICP has the potential to reduce the risk of clinical trials, as well as support the development of companion diagnostics to match drugs with patients.

- **Clinical Laboratories** (such as: Laboratory Corporation of America Holdings, Quest Diagnostics Incorporated and the many CLIA-certified laboratories throughout the United States). MX-ICP would allow clinical laboratory firms to effectively compete with more specialized providers and to become full service providers as personalized, precision medicine becomes more widely adopted.

The markets in which we compete require a wide variety of technologies, products and capabilities. The combination of technological complexity and rapid change within our markets makes it difficult for a single company to develop all of the solutions that it desires to offer as part of its family of products and services. We work to broaden the range of products and services we deliver to customers in target markets through acquisitions, investments and alliances. We employ the following strategies to address the need for new or enhanced products and services:

- Developing new technologies and products internally;
- Acquiring all or parts of other companies;
- Entering into joint-development efforts with other companies; and
- Reselling other companies' products.

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Our strategy is to leverage the discoveries in our Research and Development (R&D) and Biomarker Identification laboratories to create “kits” or assays to distribute through our Genetic Assays and Platforms segment, as well as tests to conduct in our Patient Testing laboratories.

We will continue to develop new applications for, and enhancements of, MX-ICP and capitalize on our expertise and intellectual properties to develop unique new applications of the MX-ICP technology for potential partnerships. We will focus on growth in our core markets via direct sales and business development activities with industry leaders across the globe.

Products

MX-ICP is our proprietary technology product with industry transforming potential. It is exclusively licensed by Transgenomic from Dana-Faber Cancer Institute. MX-ICP is a unique amplification technology that suppresses wild-type (normal) DNA and thereby enables the selective amplification of all mutations (genetic alterations) present in that region of the genome. As a result of its ultra-high sensitivity (1000 times more sensitive than standard DNA sequencing alone), it works on almost all sample types that contain DNA, including tissue, blood, urine and saliva or sputum; it can be used on all sequencing platforms; and it is easily implemented into standard laboratory processes without significant investment of time or resources. MX-ICP has applications in all therapeutic areas, but the first and major focus at this time is the estimated $2.5 billion market for cancer testing. The Company also believes that the current market for clinical diagnostic (MDx) use of PCR, which is estimated to be in excess of $10 billion in 2015 based on external reports, will continue to grow and is a validation of the size of market for this type of technology and product. Importantly, MX-ICP is platform agnostic and can therefore be integrated and implemented into any clinical testing, basic research or biopharmaceutical laboratory. In addition, the MX-ICP product is a simple chemical reagent that is able to be mass-produced and supplied efficiently to any end user.

Our highly specialized genetics analytical services and expertise are utilized by our Biomarker Identification laboratory in Omaha, Nebraska and in our CLIA-certified Patient Testing laboratories in Omaha, Nebraska and New Haven, Connecticut. Our Biomarker Identification laboratory supports pharmaceutical companies in their clinical trials, primarily Phase II and Phase III trials. Our Patient Testing laboratories support medical professionals in the diagnosis and treatment of patients, primarily in the specialties of Cardiology and Neurology, with a range of tests within each medical specialty.

In cardiology, our FAMILION® family of tests focuses on detecting mutations that can cause cardiac channelopathies, cardiomyopathies and other rare, potentially lethal heart conditions. The specific diseases include Long QT Syndrome (“LQTS”), Familial Atrial Fibrillation (“FAF”), Hypertrophic Cardiomyopathy (“HCM”) and Dilated Cardiomyopathy (“DCM”). By reducing uncertainty and finding the specific genetic causes of cardiac channelopathies and cardiomyopathies, the FAMILION tests can:

- Help diagnose a patient's disease;
- Guide treatment options; and
- Determine whether family members are at risk.

In neurology, we focus on mitochondrial disorders, epilepsy and epilepsy-like diseases. We employ a wide variety of technologies, including industry standards such as Sanger sequencing and NGS. In 2013, we introduced whole exome sequencing, which is based on NGS, and which specialists use to diagnose and treat exceptionally difficult to identify neurological disorders in patients.

Our expanding oncology tests are focused heavily on genetic mutations commonly associated with the major cancer types - lung, colorectal, breast and prostate. We primarily test for mutations in the KRAS, NRAS, BRAF and PIK3CA genes, all associated with the most common types of cancers. The presence or absence of these mutations increasingly influences oncologists' treatment choices for their patients. We have been focused on testing for low level mutations in colorectal cancer tissue biopsies that are targets for new therapies, and we intend to continue this and improve on it as we incorporate our MX-ICP technology products into our oncology testing menu. We also offer tests for hereditary cancer-predisposing syndromes.

Our laboratory expertise is leveraged in our Genetic Assays and Platforms segment, which focuses on assembly and delivery of highly-sensitive mutation detection equipment, primarily our WAVE platform. We also sell WAVE MCE and Hanabi instruments, as well as the bioconsumables, including test kits used with these instruments for molecular testing and cytogenetics. Our equipment systems offer discovery and detection of genetic variations at close to 100% sensitivity, making them among the most sensitive and accurate technologies for detection of known and unknown mutations and single nucleotide polymorphisms (SNPs). These equipment systems are used throughout the world to screen for a large variety of diseases. More than 350 human genes have been screened entirely or partly using Direct High Pressure Liquid Chromatography (DHPLC), the underlying technology used by our equipment systems. A multitude of other applications are being used with WAVE Systems in such diverse areas as plant genomics, microbial analysis and drug sensitivity.

We continue to leverage the synergies of our two segments, capitalizing on discoveries in our R&D and Biomarker Identification laboratories to create “kits” or test assays to distribute through our Genetic Assays and Platforms segment, as well as tests to conduct in our Patient Testing laboratories.

Sales and Marketing

Our strategy for commercializing MX-ICP is to focus on enabling strategic licensing technology agreements with established partners in the fields of: instrumentation and reagent suppliers, biotechnology and pharmaceutical companies, and clinical laboratories. In order to optimize this we are focusing on these business to business activities and using external consultants with significant market and domain expertise to accelerate this strategy. We anticipate announcing the first such transaction[s] in 2015. Additionally MX-ICP will be offered as a part of our services to our pharmaceutical and biotechnology clients by our dedicated services team, in order to enable clinical studies and patient stratification work currently underway or in development with our current clients. Our core Sales and Support team consists of regionally-based sales people, service engineers and applications scientists to support our sales and marketing activities worldwide. We have sold our legacy products and services to customers in over 50 countries. We use a direct sales and support staff for sales in the U.S. and Europe. For the rest of the world, we sell our products through dealers and distributors within local markets. We currently have over 35 dealers and distributors.

Customers

We expect to expand our customer base in 2015 and onwards through licensing and partnership agreements for MX-ICP with instrumentation and reagents suppliers, pharmaceutical and biotechnology companies and clinical laboratories.

Currently, physicians requesting genetic tests for their patients are our primary source of current revenues for laboratory services. Fees for laboratory testing services rendered for these physicians are billed either to the physician, the patient or the patient's third-party payer such as an insurance company or Medicare. Billings are typically on a fee-for-service basis. The patient or third-party payer is billed at our patient fee schedule. Commercial insurance providers are billed at contracted rates or other generally-accepted market reimbursement rates. Revenues received from Medicare billings are based on government-established fee schedules and reimbursement rules.

Our customers include a number of large, established pharmaceutical, biotech and commercial companies as well as leading academic and medical institutions in the U.S. and abroad. No customer accounted for more than 10% of our consolidated net sales for the years ended December 31, 2014, 2013 or 2012. Information regarding the revenues attributable to U.S. and international markets is set forth in Footnote 15 - "Operating Segment and Geographic Information", to our accompanying consolidated financial statements.

Research and Development

We continue to invest in research and development in order to remain competitive and to take advantage of new business opportunities as they arise. We maintain a program of research and development with respect to platform technologies, such as ICE COLD-PCR, instruments, test kits and services, engaging existing and new technologies to create scientific and medical applications that will add value to patient care as well as significant commercial value. Major areas of focus include the (i) development of ICE COLD-PCR applications for ultra-high sensitivity mutation detection in any liquid (including blood, sputum and urine) and tissue samples (fresh, frozen, FNA, FFPE, etc.); (ii) development of a new strategy for mutation detection and sequence confirmation using micro-capillary electrophoresis; (iii) use of commercially-available assays and the development of custom assays for detection of somatic mutations in cancer samples using NGS and digital PCR or droplet PCR; and (iv) development of biomarker assays for the marketplace. For the years ended December 31, 2014, 2013 and 2012, our research and development expenses were $2.9 million, $3.2 million and $2.5 million, respectively.

Manufacturing

We manufacture bioconsumable products including our test kits, separation columns, liquid reagents and enzymes. The major components of our WAVE Systems are manufactured for us by a third party. We integrate our hardware and software with these third party manufactured components. Our manufacturing facilities for WAVE Systems and bioconsumables are located in Omaha, Nebraska and San Jose, California.

Intellectual Property

To establish and protect our proprietary technologies and products, we rely on a combination of patent, copyright, trademark and trade secret laws, license agreements' contractual confidentiality provisions and confidentiality agreements. Our WAVE Systems and related consumables are protected by patents and in-licensed technologies that expire in various periods through 2030. Our ICE COLD-PCR platform technology is protected by in-licensed patents that expire in various periods through 2031. As part of the FAMILION acquisition in 2010, we acquired exclusive rights to the FAMILION family of genetic tests for inherited disease, including the patents protecting this technology. As we expand our product offerings, we also are extending our patent development efforts to protect such product offerings. Established competitors, as well as companies that purchase and enforce patents and other intellectual property, may already have patents covering similar products. There is no assurance that we will be able to obtain patents covering our products, or that we will be able to obtain licenses from such companies on favorable terms or at all. However, while patents are an important element of our success, our business as a whole is not significantly dependent on any one patent.

We will continue to file patent applications, seek new licenses, take advantage of available copyright and trademark protections and implement appropriate trade secret protocols to protect our intellectual property. Despite these precautions, there can be no assurance that misappropriation of our products and proprietary technologies will not occur.

In addition to our own products, we distribute or act as a sales agent for OEM Equipment developed by third parties. Our rights to those third party products and the associated intellectual property rights are limited by the terms of the contractual agreement between us and the respective third party.

Although we believe that our developed and licensed intellectual property rights do not infringe upon the proprietary rights of third parties, there can be no assurance that third parties will not assert infringement claims against us. Further, there can be no assurance that intellectual property protection will be available for our products in the U.S. or foreign countries.

Like many companies in the biotechnology and other high-tech industries, third parties have in the past and may in the future assert claims or initiate litigation related to patent, copyright, trademark or other intellectual property rights to business processes, technologies and related standards that are relevant to us and our customers. These assertions have increased over time as a result of the general increase in patent claims assertions, particularly in the United States. Third parties may also claim that their intellectual property rights are being infringed by our customers' use of a business process method that utilizes products in conjunction with other products, which could result in indemnification claims against us by our customers. Any claim against us, with or without merit, could be time-consuming and a distraction to management, result in costly litigation, cause product delivery delays, require us to enter into royalty or licensing agreements or pay damages or amounts in settlement, prohibit us from selling certain products or require us to develop alternative non-infringing technology. We could also be required to defend or indemnify our customers against such claims.

Government Regulation

We are subject to a variety of federal, state and municipal environmental and safety laws based on our use of hazardous materials in both manufacturing and research and development operations. We believe that we are in material compliance with applicable environmental laws and regulations. However, if we cause contamination to the environment, intentionally or unintentionally, we could be responsible for damages related to the clean-up of such contamination or individual injury caused by such contamination. We cannot predict how changes in laws and regulations will impact how we conduct our business operations in the future or whether the costs of compliance will increase in the future.

Regulation by governmental authorities in the United States and other countries is not expected to be a significant factor in the manufacturing, labeling, distribution and marketing of our products and systems. However, we continue to monitor and engage in dialog with the FDA and other regulatory bodies. Please see the section of this Annual Report entitled "Risk Factors" for other risks associated with regulatory requirements.

Competition

The markets in which we operate are highly competitive and characterized by rapidly changing technological advances. Many of our competitors possess greater resources than us and may be able to develop and offer a greater breadth of products and/or services, coupled with significant marketing and distribution capabilities. We compete principally on the basis of uniquely enabling scientific technical advantages in specific but significant market segments.

Our Laboratory Services segment faces competition from a number of companies offering contract DNA sequencing and other genomic analysis services, including SeqWright and others. In addition, several clinical diagnostics service providers, such as LabCorp, Quest Diagnostics, Foundation Medicine, GeneDx and Baylor College of Medicine, also offer related laboratory services. Finally, additional competition arises from academic core laboratory facilities. Competition for our WAVE System arises primarily from DNA sequencing and genotyping technologies. Competitors in these areas include, among others, Thermo Fisher, Qiagen N.V., F. Hoffman-La Roche, Ltd., Sequenom, Inc and Illumina, Inc. Competition for some of our non-WAVE consumable products comes from numerous well-diversified life sciences reagents providers, including, among others, Thermo Fisher, Qiagen N.V., Roche, Agilent Technologies, Inc. and Promega Corporation.

Employees

As of December 31, 2014 and 2013, we had employees focused in the following areas of operation:

	December 31,	
	2014	2013
Manufacturing and Laboratory	84	76
Sales, Marketing and Administration	60	86
Research and Development	8	9
	152	171

Of our 152 total employees as of December 31, 2014, a total of 150 were full-time employees.

Our employees were employed in the following geographical locations:

	December 31,	
	2014	2013
United States	131	151
Europe (other than the United Kingdom)	11	10
United Kingdom	10	10
	152	171

General Information

We were incorporated in Delaware on March 6, 1997. Our principal office is located at 12325 Emmet Street, Omaha, Nebraska 68164 (telephone: 402-452-5400). This facility houses certain administrative staff and laboratories. We maintain manufacturing facilities in Omaha, Nebraska and San Jose, California. We maintain research and development offices in Omaha, Nebraska. We maintain laboratories in Omaha, Nebraska and New Haven, Connecticut that have been certified under the CLIA. Our New Haven facility also houses certain administrative operations.

Our Internet website is located at http://www.transgenomic.com. The information on our website is not a part of this Annual Report. We make available free of charge on our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Our SEC reports can be accessed through the investor relations section of our Internet website.

The public may also read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. The SEC's Internet website is located at http://www.sec.gov.

Executive Officers of the Registrant

Paul Kinnon. Mr. Kinnon, age 51, has served as our President and Chief Executive Officer and a Director since September 2013 and as our Interim Chief Financial Officer since October 2014. Mr. Kinnon has more than 20 years of global leadership experience in innovative life science and diagnostics companies. From January through August 2013, he provided consulting services to the life science sector as a Partner at Arch Global Research. During a portion of this time, Mr. Kinnon provided consulting services to us. From January 2007 to December 2012, Mr. Kinnon was President, Chief Executive Officer and a Director of ZyGEM Corporation Limited, a biotechnology company, where he transformed the company from a regional enzyme provider into a leader in integrated microfluidic technologies for forensic and clinical diagnostic applications. From May 2006 to June 2007, Mr. Kinnon was Vice President & General Manager Environmental Diagnostics (later expanded to Applied Markets) at Invitrogen Corporation (now Life Technologies), a high growth life sciences and diagnostics firm, and from October 2004 until April 2006, he was Vice President, Global Strategic Alliances at Invitrogen. Previously, Mr. Kinnon also held business, sales and marketing roles of increasing responsibility at Guava Technologies, Inc., Cellomics, Inc. and other life science companies. Mr. Kinnon earned his Bachelor of Sciences degree in Applied Chemistry at Coventry University in the United Kingdom and holds a Diploma of Marketing. A petition in bankruptcy was filed against ZyGEM Corporation Limited in April 2013.

Leon F. Richards. Mr. Richards, age 58, was appointed our Chief Accounting Officer by our Board of Directors in October 2014. Mr. Richards is an experienced corporate finance executive and certified public accountant with more than 30 years of experience building and leading financial organizations. Mr. Richards has served as our Controller since November 2012. He most recently served as Controller and Chief Accounting Officer of Baldwin Technology Company, Inc., a leading global supplier of process automation equipment for the printing and publishing industry, from May 2004 to September 2012. Mr. Richards earned his Bachelor of Business Administration and Accounting from Iona College."

The information under Part III, "Item 10. Directors, Executive Officers and Corporate Governance" of the Original Form10-K is hereby amended and restated in its entirety to read as follows:

"**Board of Directors and Committees**

Our Board consists of five directors. The Board is divided into three classes with directors in each class serving for a term of three years. The terms of office of the current Class I, Class II and Class III directors will expire in 2016, 2017 and 2015, respectively. The Preferred Stockholders are entitled, as a separate voting group, to elect two of the five directors (the "Preferred Stock Directors"). The Common Stockholders are entitled, as a separate voting group, to elect the three remaining directors (the "Common Stock Directors"). There is one Common Stock Director in each class. There is one Preferred Stock Director in each of Class I and Class II, but not a Preferred Stock Director in Class III.

Robert M. Patzig is the current Preferred Stock Director in Class I, Paul Kinnon is the current Common Stock Director in Class I, Doit L. Koppler, II is the current Preferred Stock Director in Class II, John D. Thompson is the current Common Stock Director in Class II and Michael A. Luther, Ph.D. is the current Common Stock Director in Class III.

Certain biographical information regarding our director nominee and directors continuing in office after the Annual Meeting, including their ages as of April 21, 2015 and the dates that they were first elected to our Board, is set forth below. In each individual's biography we have highlighted specific experience, qualifications, and skills that have led the Board to conclude that such individual is a valued member of our Board. In addition to these specific attributes, all of our directors have significant expertise in one or more areas of importance to our business and have high-level managerial experience in relatively complex organizations or are accustomed to dealing with complex problems. We believe all of our directors are individuals of high character and integrity, are able to work well with others, and have sufficient time to devote to the affairs of our company.

Name	Age	Principal Occupation	Director Since	Term to Expire
CLASS III DIRECTOR NOMINEE				
Michael A. Luther, Ph.D., Common Stock Director	58	Senior Vice President, Discovery and Development Services, Albany Molecular Research, Inc.	2014	2015
CLASS I DIRECTORS CONTINUING IN OFFICE				
Robert M. Patzig, Preferred Stock Director	46	Chairperson of the Board, Transgenomic, Inc.	2010	2016
Paul Kinnon, Common Stock Director	52	President, Chief Executive Officer and Interim Chief Financial Officer of Transgenomic, Inc.	2013	2016
CLASS II DIRECTORS CONTINUING IN OFFICE				
Doit L. Koppler, II, Preferred Stock Director	51	Managing Director and Treasurer, Third Security, LLC	2010	2017
John D. Thompson, Common Stock Director	66	Retired Senior Vice President, Strategy & Corporate Development, Invitrogen Corporation	2014	2017

Michael A. Luther, Ph.D. Dr. Luther has served as Senior Vice President, Discovery and Development Services, at Albany Molecular Research, Inc. (NASDAQ: AMRI), a global contract research and manufacturing organization offering drug discovery, development and manufacturing services, since October 2013, where he is responsible for the strategic, operational and business development activities for Albany Molecular Research, Inc.'s global discovery and development divisions. From August 2012 to September 2013, Dr. Luther was Corporate Vice President of Global Discovery Research Services at Charles River Laboratories (NYSE: CRL), a global provider of products and services to pharmaceutical and biotechnology companies, government agencies and academic institutions, where he served as the general manager of the firm's discovery business unit, including developing and implementing strategic and operating plans. Prior to his role at Charles River, from March 2009 to August 2012, he was President and a member of the Board of Directors of the David H. Murdock Research Institute, a non-profit contract research organization located in Kannapolis, North Carolina, where he led and directed all activities of the institute, including applied research and development activities. From November 2006 to March 2009, Dr. Luther held the position of Vice President and Site Head at Merck Frosst, a pharmaceutical company in Montreal, Canada, focused on the delivery of Phase I product candidates from target to clinic for novel therapeutics in respiratory and metabolic disorders. Prior to Merck Frosst, from 1991 to 2006, he held positions of increasing responsibilities at GlaxoSmithKline, a global healthcare company that researches and develops a broad range of innovative medicines and brands, culminating in his appointment as Vice President, High Throughput Biology. Dr. Luther holds a Bachelor of Science degree in Biology and Chemistry from North Carolina State University, a Master in Business Administration from Duke University, Fuqua School of Business, and a Ph.D. in Biophysical Chemistry from Saint Louis University School of Medicine. He has served as a member of the board of directors of Islet Sciences, Inc., a biopharmaceutical company (OTC: ISLT), since March 2014. The Board selected Dr. Luther to serve as a director because it believes he possesses valuable experience in the healthcare and pharmaceutical industries and extensive strategic, scientific and business

experience in such industries, which brings a unique and valuable perspective to the Board.

Robert M. Patzig. On February 12, 2015, Mr. Patzig was appointed Chairperson of the Board. He had been standing Chairperson since January 1, 2015 and has been a Board member since December 2010. Since June 2014, Mr. Patzig has also served as Board Chair of Ligmincha International, a non-profit organization focused on the preservation and dissemination of Tibetan Bon Buddhism. Until December 31, 2014, Mr. Patzig was Senior Managing Director and the Chief Investment Officer for Third Security, LLC, an investment firm with a concentration in life science. Mr. Patzig joined Third Security upon its inception in 1999. Mr. Patzig's responsibilities included identifying and evaluating investment opportunities for Third Security and its funds as well as general portfolio oversight and portfolio management. Prior to the formation of Third Security, Mr. Patzig served as Director of Market Research and Analysis at GIV Holding, Inc. and Director of Research Services at General Injectables & Vaccines, Inc. He served as a member of the Board of Directors of Cyntellect, Inc. from February 2011 until June 2012 and previously as Chairman of the Board from July 2007 to September 2008. Mr. Patzig was a Director of the Virginia Biotechnology Association, a non-profit industry advocacy group from 2006 until 2011. Mr. Patzig served as a member of the Board of Directors of Intrexon Corporation from May 2005 to February 2008 and was Chairman from February 2007 to February 2008. He served as a member of the Board of Directors of Synchrony, Inc. from February 2006 to April 2008. Mr. Patzig also served as the head of the Investment Committee for Howe and Rusling, Inc. a registered investment advisor from 2001 until its sale in 2006. Mr. Patzig received a B.A. in Philosophy and an M.A. in English from Virginia Tech. The Board appointed Mr. Patzig as its Chairperson because of his substantial biotechnology industry experience as well has his securities and investment expertise.

Paul Kinnon. Mr. Kinnon has served as our President and Chief Executive Officer and a Director since September 2013. On October 31, 2014, Mr. Kinnon was appointed Interim Chief Financial Officer. Mr. Kinnon has more than 20 years of global leadership experience in innovative life science and diagnostics companies. From January through August 2013, he provided consulting services to the life science sector as a Partner at Arch Global Research. During a portion of this time, Mr. Kinnon provided consulting services to us. From January 2007 to December 2012, Mr. Kinnon was President, Chief Executive Officer and a Director of ZyGEM Corporation Limited, a biotechnology company, where he transformed the company from a regional enzyme provider into a leader in integrated microfluidic technologies for forensic and clinical diagnostic applications. From May 2006 to June 2007, Mr. Kinnon was Vice President & General Manager Environmental Diagnostics (later expanded to Applied Markets) at Invitrogen Corporation (now Life Technologies), a high growth life sciences and diagnostics firm, and from October 2004 until April 2006, he was Vice President, Global Strategic Alliances at Invitrogen. Previously, Mr. Kinnon also held business, sales and marketing roles of increasing responsibility at Guava Technologies, Inc., Cellomics, Inc. and other life science companies. Mr. Kinnon earned his Bachelor of Sciences degree in Applied Chemistry at Coventry University in the United Kingdom and holds a Diploma of Marketing. A petition in bankruptcy was filed against ZyGEM Corporation Limited in April 2013. The Board selected Mr. Kinnon to serve as a director because he is our Chief Executive Officer and because of his expansive knowledge and experience in the life science industry, as well as his past executive management roles at both life science and biotechnology companies.

Doit L. Koppler, II. Mr. Koppler joined Third Security as Managing Director and Treasurer in 2001 and manages the finance function of Third Security and is involved with several portfolio companies of Third Security's managed investment funds. Mr. Koppler served as Vice President, Treasurer and a member of the Board of Directors of Vital Diagnostics Holding Corp., a global supplier of products and services for the clinical laboratory in the traditional in vitro diagnostics market with a focus on the physician's office, hospital and small-to-medium sized laboratory segments from its inception in 2006 through 2012. Mr. Koppler served as Chairman and Chief Executive Officer of New River Funds, a family of no-load mutual funds, from its inception in 2003 through 2008 and as the Chief Investment Officer of New River Advisers, LLC, the investment adviser to New River Small Cap Fund, predecessor to Southern Sun Small Cap Fund. Mr. Koppler served as a member of the Board of Directors of IntelliMat, Inc. from November 2006 to July 2008. Prior to joining Third Security, Mr. Koppler served as Vice President and Controller of General Injectables & Vaccines, Inc., a $120 million distributor of injectable biologics and vaccines primarily to outpatient physician offices, from 1992 to 2000. From 1987 to 1992, he was a Manager in the audit practice of Ernst & Young LLP. Mr. Koppler is a Certified Public Accountant, Chartered Global Management Accountant and a Member of the American Institute of Certified Public Accountants. He has also held Series 7 and Series 66 securities registrations. Mr. Koppler received a B.S. in Accounting from Salem International University. The Board selected Mr. Koppler to serve as a director because of his valuable financial expertise, including his public accounting and financial reporting experience.

John D. Thompson. Mr. Thompson has served as a consultant and board member to a number of life sciences enterprises. He was Senior Vice President, Strategy and Corporate Development at Invitrogen Corporation, where he completed over 20 transactions with an aggregate value in excess of $2 billion, in-licensed more than 200 compounds, and charted the company's ambitious growth plans. Previously Mr. Thompson was Senior Vice President, Strategic and Business Development at Dexter Corporation, where he led restructuring activities involving more than a dozen acquisitions and divestitures. Earlier he was Vice President, Financial Services and Treasurer, where he negotiated financings totaling $100 million, and refinanced multicurrency debt and credit agreements. Mr. Thompson also

worked at Dexter subsidiary, Life Technologies. As Senior Vice President and General Manager, Americas Research Products Division, he helped achieve annual double-digit sales and earnings growth while divesting less promising businesses. As Vice President Finance, Secretary and Treasurer, he helped focus the business on high technology products, oversaw the merger that resulted in the formation of Life Technologies and helped ensure the success of its IPO. Mr. Thompson began his career in public accounting at Ernst & Young. Mr. Thompson received a BBA degree from Cleveland State University. The Board selected Mr. Thompson to serve as a director because it believes he brings extensive experience in life sciences business development, corporate strategy and mergers and acquisitions at top tier firms to our Board. He was selected the Chairperson of the Audit Committee in February 2015.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act and the rules of the SEC require our directors, certain officers and beneficial owners of more than 10% of our outstanding common stock to file reports of their ownership and changes in ownership of our common stock with the SEC. We believe all Section 16 reports were filed in a timely manner during 2014, except for one Form 4 to report the grant of a stock option made on March 13, 2014 that was inadvertently filed late by Dr. Luther.

Code of Business Conduct and Ethics

Our Board has adopted a code of ethical conduct that applies to our principal executive officer, principal financial officer and senior financial management. This code of ethical conduct is embodied within our Code of Business Conduct and Ethics, which applies to all persons associated with our Company, including our directors, officers and employees (including our principal executive officer, principal financial officer, principal accounting officer and controller). The Code of Business Conduct and Ethics is available in the Investor Relations section of our website at www.transgenomic.com. In order to satisfy our disclosure requirements under Item 5.05 of Form 8-K, we will disclose amendments to, or waivers of, certain provisions of our Code of Business Conduct and Ethics relating to our chief executive officer, chief financial officer, chief accounting officer, controller or persons performing similar functions on our website promptly following the adoption of any such amendment or waiver.

Corporate Governance

Committees of our Board of Directors

Our Board has established and delegated certain responsibilities to its standing Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee.

Audit Committee

We have a separately designated standing Audit Committee established in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). The Audit Committee’s primary duties and

responsibilities include monitoring the integrity of our financial statements, monitoring the independence and performance of our external auditors, and monitoring our compliance with applicable legal and regulatory requirements. The functions of the Audit Committee also include reviewing periodically with our independent registered public accounting firm the performance of the services for which they are engaged, including reviewing the scope of the annual audit and its results, reviewing with management and the auditors the adequacy of our internal accounting controls, reviewing with management and the auditors the financial results prior to the filing of quarterly and annual reports, reviewing fees charged by our independent registered public accounting firm and reviewing any transactions between our Company and related parties. Our independent registered public accounting firm reports directly and is accountable solely to the Audit Committee. The Audit Committee has the sole authority to hire and fire the independent registered public accounting firm and is responsible for the oversight of the performance of their duties, including ensuring the independence of the independent registered public accounting firm. The Audit Committee also approves in advance the retention of, and all fees to be paid to, the independent registered public accounting firm. The rendering of any auditing services and all non-auditing services by the independent registered public accounting firm is subject to prior approval of the Audit Committee.

The Audit Committee operates under a written charter which is available in the Investor Relations section of our website at www.transgenomic.com. The Audit Committee is required to be composed of directors who are independent under the rules of the SEC and the listing standards of The Nasdaq Stock Market LLC ("NASDAQ").

The current members of the Audit Committee are directors Mr. Patzig, Dr. Luther and Mr. Thompson, the Chairperson of the Audit Committee, all of whom have been determined by the Board to be independent under the NASDAQ listing standards and rules adopted by the SEC applicable to audit committee members. The Board has determined that each of Mr. Patzig, Dr. Luther and Mr. Thompson qualifies as an "audit committee financial expert" under the rules adopted by the SEC and the Sarbanes Oxley Act of 2002. The Audit Committee met eight times during 2014 and did not take any actions by written consent.

Executive Officers of the Registrant

Paul Kinnon. Mr. Kinnon, age 51, has served as our President and Chief Executive Officer and a Director since September 2013 and as our Interim Chief Financial Officer since October 2014. Mr. Kinnon has more than 20 years of global leadership experience in innovative life science and diagnostics companies. From January through August 2013, he provided consulting services to the life science sector as a Partner at Arch Global Research. During a portion of this time, Mr. Kinnon provided consulting services to us. From January 2007 to December 2012, Mr. Kinnon was President, Chief Executive Officer and a Director of ZyGEM Corporation Limited, a biotechnology company, where he transformed the company from a regional enzyme provider into a leader in integrated microfluidic technologies for forensic and clinical diagnostic applications. From May 2006 to June 2007, Mr. Kinnon was Vice President & General Manager Environmental Diagnostics (later expanded to Applied Markets) at Invitrogen Corporation (now Life Technologies), a high growth life sciences and diagnostics firm, and from October 2004 until April 2006, he was Vice President, Global Strategic Alliances at Invitrogen. Previously, Mr. Kinnon also held business, sales and marketing roles of increasing responsibility at Guava Technologies, Inc., Cellomics, Inc. and other life science companies. Mr. Kinnon earned his Bachelor of Sciences degree in Applied Chemistry at Coventry University in the United Kingdom and holds a Diploma of Marketing. A petition in bankruptcy was filed against ZyGEM Corporation Limited in April 2013.

Leon F. Richards. Mr. Richards, age 58, was appointed our Chief Accounting Officer by our Board of Directors in October 2014. Mr. Richards is an experienced corporate finance executive and certified public accountant with more than 30 years of experience building and leading financial organizations. Mr. Richards has served as our Controller since November 2012. He most recently served as Controller and Chief Accounting Officer of Baldwin Technology Company, Inc., a leading global supplier of process automation equipment for the printing and publishing industry, from May 2004 to September 2012. Mr. Richards earned his Bachelor of Business Administration and Accounting from Iona College.

There are no family relationships between or among any of our executive officers or directors."

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Part IV

Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as part of the Company's Annual Report on Form 10-K for the year ended December 31, 2014:

1 Financial Statements. The following financial statements of the Registrant are included in response to Item 8 of the Company's Annual Report on Form 10-K for the year ended December 31, 2014:

Report of Independent Registered Public Accounting Firm.

Consolidated Balance Sheets of the Registrant and Subsidiary as of December 31, 2014 and 2013.

Consolidated Statements of Operations of the Registrant and Subsidiary for the years ended December 31, 2014, 2013 and 2012.

Consolidated Statements of Comprehensive Loss of the Registrant and Subsidiary for the years ended December 31, 2014, 2013 and 2012.

Consolidated Statements of Stockholders' Equity of the Registrant and Subsidiary for the years ended December 31, 2014, 2013 and 2012.

Consolidated Statements of Cash Flows of the Registrant and Subsidiary for the years ended December 31, 2014, 2013 and 2012.

Notes to Consolidated Financial Statements of the Registrant and Subsidiary.

2 Financial Statement Schedules.

All financial statement schedules are omitted because the information is inapplicable or presented in the notes to the financial statements.

3 Exhibits. The following exhibits are filed as required by Item 15(a)(3) of the Company's Annual Report on Form 10-K for the year ended December 31, 2014. Exhibit numbers refer to the paragraph numbers under Item 601 of Regulation S-K:

†2.1	Asset Purchase Agreement among the Registrant, Scoli Acquisition Sub, Inc. and Axial Biotech, Inc. dated August 27, 2012 (incorporated by reference to Exhibit 2.1 to the Registrant's Quarterly Report on Form 10-Q filed on November 8, 2012).
3.1	Third Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q filed on November 14, 2005).
3.2	Certificate of Amendment of Third Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on May 29, 2012).
3.3	Certificate of Amendment of Third Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on January 28, 2014).
3.4	Certificate of Amendment of Certificate of Designation of Series A Convertible Preferred Stock of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on March 6, 2014).
3.5	Certificate of Designation of Series B Convertible Preferred Stock of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on March 6, 2014).
3.6	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3(ii) to the Registrant's Current Report on Form 8-K filed on May 25, 2007).
4.1	Form of Certificate of the Registrant's Common Stock (incorporated by reference to Exhibit 4 to the Registrant's Registration Statement on Form S-1 (Registration No. 333-32174) filed on March 10, 2000).

4.2	Form of Series A Convertible Preferred Stock Warrant issued to Third Security Senior Staff 2008 LLC, Third Security Staff 2010 LLC and Third Security Incentive 2010 LLC (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).
4.3	Registration Rights Agreement, dated December 29, 2010, by and among the Registrant, Third Security Senior Staff 2008 LLC, Third Security Staff 2010 LLC and Third Security Incentive 2010 LLC (incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).
4.4	First Amendment to Registration Rights Agreement dated November 8, 2011 (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on November 14, 2011).
4.5	Form of Warrant issued by the Registrant to the Third Security Entities on February 7, 2012 (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on February 7, 2012).
4.6	Form of Warrant issued by the Registrant to the Investors on February 7, 2012 (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on February 7, 2012).
4.7	Form of Registration Rights Agreement entered into by and among the Registrant, the Third Security Entities and the Investors dated February 2, 2012 (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on February 7, 2012).
4.8	Registration Rights Agreement, entered into by and among the Registrant and the Investors, dated January 24, 2013 (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K/A filed on January 31, 2013).
4.9	Form of Warrant issued by the Registrant to the Investors on January 30, 2013 (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K/A filed on January 31, 2013).
4.10	Registration Rights Agreement, dated as of March 5, 2014, by and among the Registrant, Third Security Senior Staff 2008 LLC, Third Security Staff 2014 LLC and Third Security Incentive 2010 LLC (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on March 6, 2014).
4.11	Form of Warrant issued by Transgenomic, Inc. to the Investors and the advisor on October 22, 2014 (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on October 22, 2014).
4.12	Form of Unsecured Convertible Promissory Note issued by Transgenomic, Inc. to the Investor pursuant to the Unsecured Convertible Promissory Note Purchase Agreement, dated as of December 31, 2014 (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on January 7, 2015).
4.13	Form of Indenture, between the Registrant and one or more trustees to be named (incorporated by reference to Exhibit 4.15 to the Registrant's Registration Statement on Form S-3 (Registration No. 333-201907) filed on February 6, 2015).
4.14	Form of Common Stock Warrant Agreement and Warrant Certificate (incorporated by reference to Exhibit 4.16 to the Registrant's Registration Statement on Form S-3 (Registration No. 333-201907) filed on February 6, 2015).

4.15	Form of Preferred Stock Warrant Agreement and Warrant Certificate (incorporated by reference to Exhibit 4.17 to the Registrant's Registration Statement on Form S-3 (Registration No. 333-201907) filed on February 6, 2015).
4.16	Form of Debt Securities Warrant Agreement and Warrant Certificate (incorporated by reference to Exhibit 4.18 to the Registrant's Registration Statement on Form S-3 (Registration No. 333-201907) filed on February 6, 2015).
4.17	Form of Debt Securities (to be filed by amendment as Exhibit 4.19 to the Registrant's Registration Statement on Form S-3 (File No. 333-201907) filed on February 6, 2015 or as an exhibit to a Current Report on Form 8-K).

4.18	Specimen Preferred Stock Certificate and Form of Certificate of Designation of Preferred Stock (to be filed by amendment as Exhibit 4.20 to the Registrant's Registration Statement on Form S-3 (File No. 333-201907) filed on February 6, 2015 or as an exhibit to a Current Report on Form 8-K).
4.19	Form of Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on February 27, 2015).
*10.1	The Registrant's 2006 Equity Incentive Plan, as amended (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 28, 2014).
*10.2	1999 UK Approved Stock Option Sub Plan of the Registrant (incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form S-1 (Registration No. 333-32174) filed on March 10, 2000).
10.3	License Agreement, dated August 20, 1997, between the Registrant and Leland Stanford Junior University (incorporated by reference to Exhibit 10.15 to the Registrant's Registration Statement on Form S-1 (Registration No. 333-32174) filed on March 10, 2000).
10.4	License Agreement, dated December 1, 1989, between Cruachem Holdings Limited (a wholly owned subsidiary of the Registrant) and Millipore Corporation (incorporated by reference to Exhibit 10.13 to the Registrant's Annual Report on Form 10-K filed on March 25, 2002).
10.5	Sublicense Agreement, dated October 1, 1991, between Cruachem Holdings Limited (a wholly owned subsidiary of the Registrant) and Applied Biosystems, Inc. (incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K filed on March 25, 2002).
10.6	Missives, dated May 17, 2002, between Cruachem Limited (a wholly-owned subsidiary of the Registrant) and Robinson Nugent (Scotland) Limited (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on August 14, 2002).
10.7	License Amendment Agreement, dated June 2, 2003, by and between Geron Corporation and the Registrant (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed on August 12, 2003).
10.8	Supply Agreement, dated January 1, 2000, between the Registrant and Hitachi Instruments (incorporated by reference to Exhibit 10.16 to the Registrant's Registration Statement on Form S-1 (Registration No. 333-32174) filed on March 10, 2000).
10.9	License Agreement between the Registrant and the Dana-Farber Cancer Institute dated October 8, 2009 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on November 5, 2009).
*10.10	Employment Agreement between the Registrant and Mark P. Colonnese (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 17, 2012).
10.11	Securities Purchase Agreement, entered into by and among the Registrant and the Investors, dated January 24, 2013 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K/A filed on January 31, 2013).

10.12	Forbearance Agreement, dated February 7, 2013, by and between the Registrant and Dogwood Pharmaceuticals, Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on February 8, 2013).
10.13	Loan and Security Agreement among the Registrant, Third Security Senior Staff 2008 LLC, as administrative agent and a lender, and the other lenders party thereto, dated March 13, 2013 (incorporated by reference to Exhibit 10.39 to the Registrant's Annual Report on Form 10-K filed on March 14, 2013).
10.14	First Amendment to Loan and Security Agreement among the Registrant, Third Security Senior Staff 2008 LLC, as administrative agent and a lender, and the other lenders party thereto, dated August 2, 2013 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on August 6, 2013).
*10.15	Employment Agreement between the Registrant and Paul Kinnon, effective September 30, 2013 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 30, 2013).

*10.16	Form of Incentive Stock Option Agreement between the Registrant and Paul Kinnon, effective September 30, 2013 (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed on November 14, 2014).
*10.17	Form of Stock Appreciation Rights Agreement between the Registrant and Paul Kinnon, effective September 30, 2013 (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q filed on November 14, 2014).
*10.18	Form of Stock Appreciation Rights Agreement between the Registrant and Mark Colonnese, effective September 30, 2013 (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q filed on November 14, 2014).
*10.19	Form of Stock Appreciation Rights Agreement under the 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K filed on September 30, 2013).
10.20	Second Amendment to Loan and Security Agreement among the Registrant, Third Security Senior Staff 2008 LLC, as administrative agent and a lender, and the other lenders party thereto, effective October 31, 2013 (incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q filed on November 14, 2014).
10.21	Limited Waiver and Third Amendment to Loan and Security Agreement among Transgenomic, Inc., Third Security Senior Staff 2008 LLC, as administrative agent and a lender, and the other lenders party thereto, dated January 27, 2014.
10.22	Fourth Amendment to Loan and Security Agreement among Transgenomic, Inc., Third Security Senior Staff 2008 LLC, as administrative agent and a lender, and the other lenders party thereto, dated March 3, 2014 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on March 6, 2014).
10.23	Series B Convertible Preferred Stock Purchase Agreement, dated as of March 5, 2014, by and among Transgenomic, Inc. and Third Security Senior Staff 2008 LLC, Third Security Staff 2014 LLC and Third Security Incentive 2010 LLC (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on March 6, 2014).
‡10.24	Collaboration Agreement, dated as of October 9, 2013, by and between the Registrant and PDI, Inc.
‡10.25	Surveyor Kit Patent, Technology, and Inventory Purchase Agreement, dated as of July 1, 2014, by and between the Registrant and Integrated DNA Technologies, Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on November 12, 2014).
10.26	Securities Purchase Agreement, dated as of October 22, 2014, by and among Transgenomic, Inc. and the Investors (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on October 22, 2014).
10.27	Limited Waiver and Fifth Amendment to Loan and Security Agreement among Transgenomic, Inc., Third Security Senior Staff 2008 LLC, as administrative agent and a lender, and the other lenders party thereto, dated October 22, 2014 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form

	8-K filed on October 22, 2014).
10.28	Unsecured Convertible Promissory Note Purchase Agreement, dated as of December 31, 2014, by and between Transgenomic, Inc. and the Investor (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 7, 2015).
#12.1	Statement Regarding the Computation of Ratio of Earnings to Fixed Charges and Preferred Share Dividends for the Years Ended December 31, 2010, 2011, 2012, 2013 and 2014
#21	Subsidiaries of the Registrant.
#23.1	Consent of Independent Registered Public Accounting Firm - Ernst & Young LLP
#23.2	Consent of Independent Registered Public Accounting Firm - McGladrey LLP
#24	Powers of Attorney (included on signature page hereto).
#31.1	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
+31.2	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

31.3	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
#**32.1	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
#101.INS	XBRL Instance Document
#101.SCH	XBRL Taxonomy Extension Schema Document
#101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
#101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
#101.LAB	XBRL Taxonomy Extension Label Linkbase Document
#101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

†	Pursuant to Item 601(b)(2) of Regulation S-K, the schedules to this agreement have been omitted. The Registrant agrees to furnish supplementally a copy of any omitted schedule to the Securities and Exchange Commission upon request.
*	Denotes exhibit that constitutes a management contract, or compensatory plan or arrangement.
**	These certifications are not deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section. Such certifications will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that the Registrant specifically incorporates it by reference.
‡	Confidential treatment has been granted with respect to certain portions of this exhibit. Omitted portions have been filed separately with the SEC.
#	Included with the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on April 15, 2015, which is being amended hereby.
+	Included with the Registrant’s Amendment No. 1 to Annual Report on Form 10-K/A for the year ended December 31, 2014, filed with the SEC on August 14, 2015.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Transgenomic, Inc.

Dated: August 21, 2015

By: /s/ Paul Kinnon

Paul Kinnon

President, Chief Executive Officer and Interim Chief Financial Officer (Principal Executive Officer and Principal Financial Officer)

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