TRANSGENOMIC INC
Form 10-K
March 14, 2012
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K
(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, 2011
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)	(IRS Employer Identification Number)
12325 Emmet Street Omaha, NE 68164	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
None	N/A

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, par value $.01 per share
(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 X No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K 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 Form10-K

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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 definition of “accelerated filer”, “large accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer ¨ Accelerated Filer ý Non-Accelerated Filer ¨ Smaller Reporting Company ¨

(Do not check if a smaller reporting company)

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

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 OTC Bulletin Board on the last business day of the registrant’s most recently completed second quarter was approximately $86.2 million.

At March 13, 2012, the registrant had 71,625,725 shares of Common Stock outstanding.

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This Annual Report on Form 10-K references the following registered trademarks which are the property of Transgenomic, Inc.: DNASEP® Cartridges, WAVE® System, WAVEMAKER® Software, TRANSGENOMIC® and the Globe Logo®; MutationDiscovery.com® Website, OLIGOSEP® Cartridges for Systems and Reagents,

OPTIMASE® Polymerase, RNASEP® Cartridges, WAVE OPTIMIZED® reagents, WAVE® MD Systems, MitoScreen™ Kits, ProtocolWriter™ Software, Navigator™ Software, THE POWER OF DISCOVERY® for Lab Reagents and Educational Programs, SURVEYOR® Nuclease, and FAMILION®. All other trademarks or trade names referred to in this Annual Report on Form 10-K are the property of their respective owners.

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PART I

FORWARD-LOOKING STATEMENTS

This report, including Management's Discussion & Analysis, contains forward-looking statements. These statements are based on management's current views, assumptions or beliefs of future events and financial performance and are subject to uncertainty and changes in circumstances. Readers of this report should understand that these statements are not guarantees of performance or results. Many factors could affect our actual financial results and cause them to vary materially from the expectations contained in the forward-looking statements. These factors include, among other things: our expected revenue, income (loss), receivables, operating expenses, supplier pricing, availability and prices of raw materials, Medicare/Medicaid/Insurance reimbursements, product pricing, foreign currency exchange rates, sources of funding operations and acquisitions, our ability to raise funds, sufficiency of available liquidity, future interest costs, future economic circumstances, business strategy, industry conditions and key trends, our ability to execute our operating plans, the success of our cost savings initiatives, competitive environment and related market conditions, expected financial and other benefits from our organizational restructuring activities, actions of governments and regulatory factors affecting our business and other risks as described in our reports filed with the Securities and Exchange Commission (the "SEC"). In some cases these statements are identifiable through the use of words such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan,” “project,” “target,” “can,” “could,” “may,” “shou and similar expressions.

You are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements we make are not guarantees of future performance and are subject to various assumptions, risks and other factors that could cause actual results to differ materially from those suggested by these forward-looking statements. Actual results may differ materially from those suggested by the forward-looking statements that we make for a number of reasons including those described in Item 1A, “Risk Factors,” and other factors identified by cautionary language used elsewhere in this report.

We expressly disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

The following discussion should be read together with our financial statements and related notes contained in this report. Results for the year ended December 31, 2011 are not necessarily indicative of results that may be attained in the future.

Item 1. Our Business

Transgenomic, Inc. is a global biotechnology company advancing personalized medicine in the detection and treatment of cancer and inherited diseases through its proprietary molecular technologies and world-class clinical and research services. We have three complementary business segments.

- Clinical Laboratories. Our clinical laboratories specialize in genetic testing for cardiology, neurology, mitochondrial disorders, and oncology. Located in New Haven, Connecticut and Omaha, Nebraska the molecular clinical reference laboratories are certified under the Clinical Laboratory Improvement Amendment (CLIA) as high complexity labs and our Omaha facility is also accredited by the College of American Pathologists (CAP).
- Pharmacogenomics Services. Our Contract Research Organization located in Omaha, Nebraska provides pharmacogenomics research services supporting Phase II and Phase III clinical trials conducted by our pharmaceutical customers. This lab specializes in pharmacogenomic, biomarker and mutation discovery research serving the pharmaceutical and biomedical industries worldwide for disease research, drug and diagnostic development and clinical trial support.
- Diagnostic Tools. Our proprietary product is the WAVE® System which has broad applicability to genetic variation detection in both molecular genetic research and molecular diagnostics. There is a worldwide installed base of over 1,500 WAVE Systems as of December 31, 2011. We also distribute bioinstruments 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 bioinstruments. 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 SURVEYOR® Nuclease and a range of chromatography columns.

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Business Strategy

Our primary goal is to provide products and services to biomedical researchers, physicians, medical institutions, and diagnostic and pharmaceutical companies that are tied to advancements in the field of genomics and, increasingly, personalized medicine. Advances in genomics have fueled our efforts to understand individual differences in disease susceptibility, disease progression, and response to therapy.

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 technological solutions that it desires to offer within 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
- Acquire all or parts of other companies
- Entering into joint-development efforts with other companies
- Reselling other companies' products

Our strategy is to leverage the synergies of our three divisions, capitalizing on discoveries in our R&D and Pharmacogenomic Services labs to create “kits” or assays to distribute through our Tools division, as well as tests to conduct in our Clinical Laboratories.

We will continue to develop new technologies, such as our ICECOLD-PCR, and capitalize on our expertise and intellectual properties to develop new ground-breaking tests, such as our PGxPredict®:CLOPIDOGREL Panel. We also continue to cultivate new and expanded relationships with industry leaders across the globe, such as A. Menarini in our Tools business, and a list of medical research facilities working with our two laboratory divisions.

We continue to evaluate a range of acquisition targets, including smaller single-test labs as well as larger private and public entities, as well as divisions of entities. We acquired the Familion business in December, 2010, and quickly integrated it into our existing business, and believe we are skilled at such acquisition integrations.

Products

Our highly specialized genetics service and expertise are delivered by our Pharmacogenomic Services Laboratory in Omaha, NE and in our Clinical Laboratory Improvement Act (CLIA)-certified Clinical Laboratories in Omaha and New Haven, CT. Our Pharmacogenomics Lab supports pharmaceutical companies in their clinical trials, primarily phase II and phase III trials. Our Clinical Laboratories division support medical professionals in the diagnosis and treatment of patients, primarily in the specialties of Cardiology, Neurology and Oncology 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 (AF), 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
- Determine whether family members are at risk

Also in cardiology, our PGxPredict®:CLOPIDOGREL Panel seeks to identify the approximately 50% of patients with a genetic deficiency that prevents them from receiving the expected pharmacological benefit from clopidogrel (Plavix®). Information from the PGxPredict®:CLOPIDOGREL Panel can be used by the health care provider to ensure the most appropriate anti-platelet therapy is being used in an effort to reduce adverse cardiac events.

In Neurology, we have a focus on mitochondrial disorders and epilepsy and epilepsy-like diseases. We employ a wide variety of technologies, including proprietary technologies such as the WAVE, and industry standards such as Sanger sequencing. In 2011 we introduced the NuclearMitome test, which is based on next-generation sequencing, currently run in a partner lab at Seattle Children's Hospital.

Our 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 K-RAS, N-RAS, BRAF, and PIK3CA

genes, all associated with the most common cancers. We also offer tests for hereditary cancer-predisposing syndromes.

Our lab expertise is leveraged into our Diagnostic Tools division, which focuses on assembly and delivery of highly sensitive mutation detection equipment, primarily our WAVE, WAVEmce, and Hanabi instruments, as well as the

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bioconsumables used in these instruments for molecular testing and cytogenetics. Transgenomic equipment systems offer discovery and detection of genetic variation 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 by 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 the three divisions, capitalizing on discoveries in our R&D and Pharmacogenomic Services labs to create “kits” or test assays to distribute through our Tools division, as well as tests to conduct in our Clinical Laboratories.

Sales and Marketing

Our 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 products 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 have over 35 dealers and distributors.

Customers

Physicians requesting genetic tests for their patients are our primary source of 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, Medicare or Medicaid. 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 and Medicaid 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 addition, our customers also include a number of large, established pharmaceutical, biotech and commercial companies both in the U.S. and abroad. No customer accounted for more than 10% of our consolidated net sales for the years ended December 31, 2011, 2010 or 2009. Information regarding the revenues attributable to U.S. and international markets is set forth in Note P to the footnotes to our 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 instruments 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 (i) development of SURVEYOR® Nuclease based oncology mutation detection kits utilizing multiple instrument platforms for aid in therapeutic treatment decisions for cancers such as colorectal, melanoma, non small cell lung; (ii) a new discovery in high sensitivity DNA mutation detection for Sanger Sequencing; (iii) development of ICE COLD-PCR applications for ultra-high sensitivity mutation detection in any tissue samples (fresh, frozen, FNA, FFPE, etc.) and body fluids (plasma, serum, ascites); (iv) a “toolbox” of mitochondrial DNA assays to assess damage, copy number, deletion and mutation for applications ranging from toxicology to diabetes to aging; and (v) development of a biomarker for FC Gamma receptor to aid in the selection of therapeutic options for monoclonal antibody cancer drugs. For the years ended December 31, 2011, 2010 and 2009, our research and development expenses were $2.2 million, $2.3 million and $3.2 million, respectively.

Manufacturing

We manufacture bioconsumable products including our 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 provisions and confidentiality agreements. Our WAVE Systems and related consumables are protected by patents and in-licensed technologies that expire in various periods beginning in 2012 through 2030. As part of the FAMILION Acquisition, we acquired exclusive rights to the FAMILION family of

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genetic tests for inherited disease, including the patents protecting this technology. As we expand our product offerings, we also extend 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 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 all 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, result in costly litigation, cause product delivery delays, require us to enter into royalty or licensing agreements or pay amounts in settlement, or require us to develop alternative non-infringing technology. We could also be required to defend or indemnify our customers against such claims. A successful claim by a third-party of intellectual property infringement by us or one of our customers could compel us to enter into costly royalty or license agreements, pay significant damages or even stop selling certain products and incur additional costs to develop alternative non-infringing technology.

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. 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

Competition

The markets in which we operate are highly competitive and characterized by rapidly changing technological advances. A number 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 division faces competition from a number of companies offering contract DNA sequencing and other genomic analysis services, including Genzyme, SeqWright and others. In addition, several clinical diagnostics service providers, such as Labcorp, Quest, 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 Applied Biosystems, Qiagen, Roche, Sequenom, and others. Competition for some of our non-WAVE consumable products comes from numerous well-diversified life sciences reagents providers, including, among others, Invitrogen, Qiagen, Roche, Stratagene, and Promega.

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Employees

As of December 31, 2011 and 2010, we had employees focused in the following areas of operation:

	December 31, 2011	2010
Manufacturing and Laboratory	68	62
Sales, Marketing and Administration	92	88
Research and Development	9	12
	169	162

Our employees were employed in the following geographical locations:

	December 31, 2011	2010
United States	148	136
Europe (other than the United Kingdom)	10	15
United Kingdom	11	10
Canada	—	1
	169	162

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 our 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 Clinical Laboratory Improvement Amendments of 1988 ("CLIA").

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 report 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 soon as reasonably practicable after we electronically file such material with, or furnish it to, the Unite States Securities and Exchange Commission ("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, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the Securities and Exchange Commission 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

Craig J. Tuttle. Mr. Tuttle, age 59, has served as our President and Chief Executive Officer since 2006. From 2004 to 2005, Mr. Tuttle was President and Chief Operating Officer of Duke Scientific. From 1999 to 2003, Mr. Tuttle served as President and Chief Executive Officer of Applied Biotech, Inc. The Board selected Mr. Tuttle to serve as a director because he is the Company's Chief Executive Officer. He has expansive knowledge and experience in the biotech industry, as well as relationships with chief executives and other senior management at biotechnology companies and leading research institutions.

Chad M. Richards. Mr. Richards, age 42, joined the Company in October 2007 as Senior Vice President, Sales and Marketing and was promoted to Chief Commercial Officer in January 2011. Before joining the Company,

Mr. Richards was the National Sales Director for Anatomic Pathology with Quest Diagnostics. During his career with Quest Diagnostics, Mr. Richards held a variety of sales management roles in both their physician and hospital business segments. Before joining Quest Diagnostics, Mr. Richards held different marketing and sales management roles with Roche Diagnostics Ventana Medical Systems Division, one of the world's leading developers and manufacturers of immunohistochemistry and in-situ hybridization instruments and

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reagent systems. Before embarking on a career in diagnostics, Mr. Richards served in the United States Marine Corps.

Brett L. Frevert. Mr. Frevert, age 49, was appointed as our Chief Financial Officer by the Board of Directors on June 28, 2010. Mr. Frevert serves as Chief Financial Officer pursuant to the terms a letter agreement with CFO Systems, LLC ("CFO Systems") and Brett L. Frevert. Under the letter agreement CFO Systems provides financial and consulting services to us. Since 2004 Mr. Frevert has been Managing Director of CFO Systems, which he founded. During that time he has served as CFO of several Midwestern companies, including SEC registrants and private companies. Prior to founding CFO Systems, Mr. Frevert was Chief Financial Officer of a regional real estate firm and also served as Interim Chief Financial Officer of First Data Europe. Mr. Frevert began his career with Deloitte & Touche, serving primarily SEC-registered clients in the food and insurance industries.

Item 1A. Risk Factors

We have a history of operating losses and may incur losses in the future.

We have experienced annual losses from continuing operations since inception of our operations. Our operating loss for the years ended December 31, 2011, 2010 and 2009 were $3.0 million, $3.6 million and $1.9 million, respectively. These historical losses have been due principally to the high levels of research and development expenses and sales and marketing expenses that we have incurred in order to develop and market our products, the fixed nature of our manufacturing costs, restructuring charges, impairment charges and merger and acquisition costs.

We might enter into new acquisitions that are difficult to integrate, disrupt our business, dilute stockholder value or divert management attention.

Our success will depend in part on our ability to continually enhance and broaden our product offerings in response to changing technologies, customer demands and competitive pressures. We expect to seek to acquire businesses, technologies or products that will complement or expand our existing business, including acquisitions that could be material in size and scope. Any acquisition we might make in the future might not provide us with the benefits we anticipated upon entering into the transaction. Any future acquisitions involve various risks, including:

- Difficulties in integrating the operations, technologies, products and personnel of the acquired entities;
- The risk of diverting management's attention from normal daily operations of the business;
- Potential difficulties in completing projects associated with in-process research and development;
- Risks of entering markets in which we have no or limited direct prior experience and where competitors in such markets have stronger market positions;
- Initial dependence on unfamiliar supply chains or relatively small supply partners;
- Unexpected expenses resulting from the acquisition;
- Potential unknown liabilities associated with acquired businesses;
- Insufficient revenues to offset increased expenses associated with the acquisition; and
- The potential loss of key employees of the acquired entities.

An acquisition could result in the incurrence of debt, restructuring charges or large one-time write-offs. Acquisitions also could result in goodwill and other intangible assets that are subject to impairment tests, which might result in future impairment charges. Furthermore, if we finance acquisitions by issuing convertible debt or equity securities, our existing stockholders may be diluted.

From time to time, we might enter into negotiations for acquisitions that are not ultimately consummated. Those negotiations could result in diversion of management time and potentially significant out-of-pocket costs. If we fail to evaluate and execute acquisitions accurately, we could fail to achieve our anticipated level of growth and our business and operating results could be adversely affected.

Continued weakness in U.S. or global economic conditions could have an adverse effect on our businesses.

The economies of the United States and other regions of the world in which we do business have experienced significant weakness, which, in the case of the U.S., has resulted in significant unemployment and slower growth in economic activity. A continued decline in economic conditions may adversely affect demand for our services and products, thus reducing our revenue. These conditions could also impair the ability of those with whom we do

business to satisfy their obligations to us.

Sales have been variable.

Testing volumes in our Clinical Laboratory are dependent on patient visits to doctors' offices and other providers of

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health care and tends to fluctuate on a seasonal basis. Testing volume generally declines during the year-end holiday periods, other major holidays and the summer.

Our Pharmacogenomics Services depends on project-based work that changes from quarter to quarter. Therefore, comparison of the results of successive quarters may not accurately reflect trends or results for the full year.

Changes in payer mix could have a material adverse impact on our net sales and profitability.

Testing services are billed to physicians, patients, Medicare, Medicaid and insurance companies. Tests may be billed to different payers depending on a particular patient's medical insurance coverage. Increases in the percentage of services billed to government payors could have an adverse impact on our net sales.

Governmental payers and health care plans have taken steps to control costs.

Medicare, Medicaid and private insurers have increased their efforts to control the costs of health care services, including clinical testing services. They may reduce fee schedules or limit/exclude coverage for types of tests that we perform. Medicaid reimbursement varies by state and is subject to administrative and billing requirements and budget pressures. We expect efforts to reduce reimbursements, impose more stringent cost controls and reduce utilization of testing services will continue. These efforts, including changes in law or regulations, may have a material adverse impact on our business.

Our Laboratory requires ongoing CLIA certification.

CLIA extended federal oversight to virtually all clinical laboratories by requiring that they be certified by the federal government or by a federally approved accreditation agency. CLIA requires that all clinical laboratories meet quality assurance, quality control and personnel standards. Laboratories must also undergo proficiency testing and are subject to inspections.

The sanctions for failure to comply with CLIA requirements include suspension, revocation or limitation of a laboratory's CLIA certificate, which is necessary to conduct business, cancellation or suspension of the laboratory's approval to receive Medicare and/or Medicaid reimbursement, as well as significant fines and/or criminal penalties. The loss or suspension of a CLIA certification, imposition of a fine or other penalties, or future changes in the CLIA law or regulations (or interpretation of the law or regulations) could have a material adverse effect on us.

We believe that we are in compliance with all applicable laboratory requirements, but no assurances can be given that our laboratories will pass all future certification inspections.

Failure to comply with HIPAA could be costly.

The Health Insurance Portability and Accountability Act (HIPAA) and associated regulations protect the privacy and security of certain patient health information and establish standards for electronic health care transactions in the United States. These privacy regulations establish federal standards regarding the uses and disclosures of protected health information. Our Molecular Labs are subject to HIPAA and its associated regulations. If we fail to comply with these laws and regulations we could suffer civil and criminal penalties, fines, exclusion from participation in governmental health care programs and the loss of various licenses, certificates and authorizations necessary to operate our Laboratory Services business. We could also incur liabilities from third party claims.

Our business could be adversely impacted by health care reform.

Government attention to the health care industry in the United States is significant and may increase. The Patient Protection and Affordable Care Act passed by Congress and signed into law by the President in March 2010 could adversely impact our business. While the ultimate impact of the legislation on the health care industry is unknown, it is likely to be extensive and could result in significant change.

We may be subject to client lawsuits.

Providers of clinical testing services may be subject to lawsuits alleging negligence or other legal claims. Potential suits could involve claims for substantial damages. Litigation could also have an adverse impact on our client base and reputation. We maintain liability insurance coverage for certain claims that could result from providing or failing to provide clinical testing services, including inaccurate testing results and other exposures. Our insurance coverage limits our maximum recovery on individual claims and, therefore, there is no assurance that such coverage will be adequate.

Market demand is outside of our control.

There are many factors that affect the market demand for our products and services that we cannot control. Demand

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for our WAVE System is affected by the needs and budgetary resources of research institutions, universities, hospitals and others who use the WAVE System for genetic-variation research. The WAVE System represents a significant expenditure by these types of customers and often requires a long sales cycle. Similarly, the sales cycle for the OEM Equipment that we sell can be lengthy.

The sale of our products and business operations in international markets subjects us to additional risks.

During the past several years, international sales have represented a significant portion of our total net sales. As a result, a major portion of our net sales are subject to risks associated with international sales and operations. These risks include:

- payment cycles in foreign markets are typically longer than in the U.S., and capital spending budgets for research agencies can vary over time with foreign governments;
- changes in foreign currency exchange rates can make our products more costly in local currencies since our foreign sales are typically paid for in British Pounds or the Euro;
- the potential for changes in U.S. and foreign laws or regulations that result in additional import or export restrictions, higher tariffs or other taxes, more burdensome licensing requirements or similar impediments to our ability to sell products and services profitably in these markets; and
- the fluctuation of foreign currency to the US Dollar and the Euro to the British Pound can cause our net sales and expenses to increase or decrease, which adds risk to our financial statements.

Our WAVE System includes hardware components and instrumentation manufactured by a single supplier and if we are no longer able to obtain these components and instrumentation our ability to manufacture our products could be impaired.

We rely on a single supplier, Hitachi High Technologies America, to provide the basic instrument modules used in our WAVE Systems. While other suppliers of instrumentation are available, we believe that our arrangement with Hitachi offers strategic advantages. We have successfully converted the latest model of WAVE Systems to utilize Hitachi's newest instrument line. If we were required to seek alternative sources of supply, it could be time consuming and may require significant and costly modification of our WAVE System. Also, if we were unable to obtain instruments from Hitachi in sufficient quantities or in a timely manner, our ability to manufacture our products could be impaired, which could limit our future net sales.

The current economy may cause suppliers of products to not be able to perform.

We rely on various suppliers for products and materials needed to produce our products. In the event that they would be unable to deliver those items due to product shortage or business closure, we may be unable to deliver our products to our customers timely or may need to increase our prices. The current economy poses additional risk of our suppliers' ability to continue their businesses as usual.

Our markets are very competitive.

Many of our competitors have greater resources than we do and may enjoy other competitive advantages. This may allow them to more effectively market their products to our customers or potential customers, to develop products that make our products obsolete or to produce and sell products less expensively than us. As a result of these competitive factors, demand for and pricing of our products and services could be negatively affected.

Our patents may not protect us from others using our technology which could harm our business and competitive position.

Patent law relating to the scope of claims in the technology fields in which we operate is still evolving. The degree of future protection for our proprietary rights is uncertain. Furthermore, we cannot be certain that others will not independently develop similar or alternative products or technology, duplicate any of our products, or, if patents are issued to us, design around the patented products developed by us. Our patents or licenses could be challenged by litigation and, if the outcome of such litigation were adverse to us, our competitors could be free to use our technology. We may not be able to obtain additional patents for our technology, or if we are able to do so, patents may not provide us with adequate protection or be commercially beneficial. In addition, we could incur substantial costs in

litigation if we are required to defend ourselves in patent suits brought by third parties or if we initiate such suits.

We cannot be certain that other measures taken to protect our intellectual property will be effective.

We rely upon trade secrets, copyright and trademark laws, non-disclosure agreements and other contractual provisions for some of our confidential and proprietary information that is not subject matter for which patent protection is being sought. Such measures, however, may not provide adequate protection for our trade secrets or other proprietary information. If such measures do not protect our rights, third parties could use our technology and our ability to compete in the market would be

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reduced.

We are dependent upon licensed technologies and may need to obtain additional licenses in the future to offer our products and remain competitive.

We have licensed key components of our technologies from third parties. If these agreements were to terminate prematurely due to our breach of the terms of these licenses or we otherwise fail to maintain our rights to such technology, we may lose the right to manufacture or sell a substantial portion of our products. In addition, we may need to obtain licenses to additional technologies in the future in order to keep our products competitive. If we fail to license or otherwise acquire necessary technologies, we may not be able to develop new products that we need to remain competitive.

The protection of intellectual property in foreign countries is uncertain.

A significant percentage of our sales are to customers located outside the U.S. Patent and other intellectual property laws of some foreign countries may not protect our intellectual property rights to the same extent as U.S. laws. We may need to bring proceedings to defend our patent rights or to determine the validity of our competitors' foreign patents. These proceedings could result in substantial cost and diversion of our efforts. Finally, some of our patent protection in the U.S. is not available to us in foreign countries due to the laws of those countries.

Our products could infringe on the intellectual property rights of others.

There are a significant number of U.S. and foreign patents and patent applications submitted for technologies in, or related to, our area of business. As a result, any application or exploitation of our technology by us could infringe patents or proprietary rights of others and any licenses that we might need as a result of such infringement might not be available to us on commercially reasonable terms, if at all. This may lead others to assert patent infringement or other intellectual property claims against us.

Our failure to comply with any applicable government regulations or otherwise respond to claims relating to improper handling, storage or disposal of hazardous chemicals that we use may adversely affect our results of operations.

Our research and development and manufacturing activities involve the controlled use of hazardous materials and chemicals. We are subject to federal, state, local and international laws and regulations governing the use, storage, handling and disposal of hazardous materials and waste products. If we fail to comply with applicable laws or regulations, we could be required to pay penalties or be held liable for any damages that result and this liability could exceed our financial resources. We cannot assure you that accidental contamination or injury will not occur. Any such accident could damage our research and manufacturing facilities and operations, resulting in delays and increased costs.

Our common stock is deemed to be "penny stock" which may make it more difficult for investors to sell their shares due to suitability requirements.

Our common stock is classified as a "penny stock" under the rules of the SEC. The SEC has adopted Rule 3a51-1 that establishes the definition of a "penny stock" for the purposes relevant to us, as any equity security that has a market price of less than $5.00 per share or with an exercise price of less than $5.00 per share, subject to certain exceptions. For any transaction involving a penny stock, unless exempt, Rule 15g-9 requires that:

- a broker or dealer approve a person's account for transactions in penny stocks; and
- the broker or dealer receives from the investor a written agreement to the transaction, setting forth the identity and quantity of the penny stock to be purchased.

In order to approve a person's account for transactions in penny stocks, the broker or dealer must:

- obtain financial information and investment experience objectives of the person; and
- make a reasonable determination that the transactions in penny stocks are suitable for that person and the person has sufficient knowledge and experience in financial matters to be capable of evaluating the risks of transactions in penny stocks.

The broker or dealer must also deliver, prior to any transaction in a penny stock, a disclosure schedule prescribed by the SEC relating to the penny stock market, which is in highlight form:

- sets forth the basis on which the broker or dealer made the suitability determination; and
- that the broker or dealer received a signed, written agreement from the investor prior to the transaction.

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Generally, brokers may be less willing to execute transactions in securities subject to “penny stock” rules. This may make it more difficult for investors to dispose of our common stock and cause a decline in the market value of our stock.

Disclosure also has to be made about the risks of investing in penny stocks in both public offerings and in secondary trading and about the commissions payable to both the broker-dealer and the registered representative, current quotations for the securities and the rights and remedies available to an investor in cases of fraud in penny stock transactions. Finally, monthly statements have to be sent disclosing recent price information for the penny stock held in the account and information on the limited market in penny stocks.

We may issue a substantial amount of our common stock to holders of options and warrants and this could reduce the market price for our stock.

At December 31, 2011, we had obligations to issue 17,648,273 shares of common stock upon exercise of outstanding stock options, warrants or conversion rights. The issuance of these additional shares of common stock may be dilutive to our current shareholders and could negatively impact the market price of our common stock.

Our common stock is thinly traded and a large percentage of our shares are held by a small group of unrelated, institutional owners.

At December 31, 2011, we had 49,625,725 shares of common stock outstanding. The sale of a significant number of shares into the public market has the potential to cause significant downward pressure on the price of our common stock. This is particularly the case if the shares being placed into the market exceed the market’s ability to absorb the stock. This presents an opportunity for short sellers to contribute to the further decline of our stock price. If there are significant short sales of our stock, the price decline that would result from this activity will cause the share price to decline more so, which, in turn, may cause long holders of the stock to sell their shares thereby contributing to sales of stock in the market.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We currently lease facilities throughout the world under non-cancellable leases with various terms. The following table summarizes certain information regarding our leased facilities. Annual rent amounts presented in the table are reflected in thousands.

Location	Function	Square Footage	2012 Scheduled Rent	Lease Term Expires
Omaha, Nebraska	WAVE and Consumable Manufacturing	25,000	$139	July 2016
San Jose, California	Consumable Manufacturing	9,110	$57	February 2016
Glasgow, Scotland	Multi Functional (1)	5,059	$36	March 2017
Omaha, Nebraska	Multi Functional (1)	18,265	$204	July 2022
New Haven, Connecticut	Laboratory	22,459	$472	March 2018

(1) Multi Functional facilities include functions related to manufacturing, services, sales and marketing, research and development and/or administration.

We believe that these facilities are adequate to meet our current and planned needs. We believe that if additional space is needed in the future, we could find alternate space at competitive market rates without substantial increase in cost.

Item 3. Legal Proceedings.

We are subject to a number of claims of various amounts which arise out of the normal course of our business. In our opinion, the disposition of pending claims will not have a material adverse effect on our financial position, results of operations or cash flows.

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Item 4. Mine Safety Disclosures

Not applicable.

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PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information. Share price information for our common stock is available on the OTC Bulletin Board under the symbol TBIO.OB. The following table sets forth the high and low closing prices for our common stock during each of the quarters of 2011 and 2010. These prices reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not necessarily represent actual transactions.

	High	Low
Year Ended December 31, 2011		
First Quarter	$0.90	$0.61
Second Quarter	$1.75	$0.82
Third Quarter	$1.77	$1.00
Fourth Quarter	$1.44	$1.07
Year Ended December 31, 2010		
First Quarter	$0.88	$0.61
Second Quarter	$0.86	$0.49
Third Quarter	$0.59	$0.33
Fourth Quarter	$0.71	$0.32

Company Stock Price Performance Graph. The following graph compares five-year cumulative total returns of the Company, the NASDAQ Composite Index and the NASDAQ Biotechnology Stock Index. The graph assumes $100 was invested in the common stock of Transgenomic, Inc. and each index as of December 31, 2006 and that all dividends were re-invested.

The information contained in this Stock Performance Graph section shall not be deemed to be "soliciting material" or "filed" or incorporated by reference in future filings with the SEC, or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934, except to the extent that the Company specifically incorporates it by reference into a document filed under

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the Securities Act of 1933 (the "Securities Act") or the Securities Exchange Act of 1934.

Holders. At December 31, 2011, there are 49,625,725 shares of our common stock outstanding and approximately 2,800 holders of record.

Dividends. We have never declared or paid any cash dividends on our common stock and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. Dividends on our common stock will be paid only if and when declared by our Board of Directors. The Board's ability to declare a dividend is subject to limits imposed by Delaware corporate law. In determining whether to declare dividends, the Board may consider our financial condition, results of operations, working capital requirements, future prospects and other relevant factors. The holders of our Series A Convertible Preferred Stock (the "Series A Preferred Stock") are entitled to receive quarterly dividends.

Sale of Unregistered Securities. On December 29, 2010, the Company issued 2,586,205 shares of Series A Preferred Stock pursuant to applicable exemptions from the registration requirements of the Securities Act of 1933. The issuance of such Series A Preferred Stock was in connection with the FAMILION Acquisition. Please refer to the Series A Convertible Preferred Stock Purchase Agreement among the Company and Third Security Senior Staff 2008 LLC, Third Security Staff 2010 LLC and Third Security Incentive 2010, LLC ("Third Security Investors") dated December 29, 2010.

On November 8, 2011, the Company entered into an Amendment Agreement with the Third Security Investors, which are the holders of all of the outstanding shares of the Company's Series A Preferred Stock. Pursuant to the Amendment Agreement, the Third Security Investors and the Company agreed to amend the Certificate of Designation to eliminate certain features of the Series A Preferred Stock relating to (i) an anti-dilution adjustment to the conversion rate upon which the Series A Preferred Stock is convertible into the Company's common stock and (ii) an optional redemption of the Series A Preferred Stock by the Third Security Investors (the "Certificate Amendment"); subject to the requisite stockholder approval of the Certificate Amendment at the Company's next annual meeting of its stockholders. Pursuant to the Amendment Agreement, the Third Security Investors agreed to vote the Series A Preferred Stock and their common stock in favor of the Certificate Amendment and agreed to waive their rights to the features of the Series A Preferred Stock being eliminated by the Certificate Amendment. In exchange for the Third Security Investors entering into the Amendment Agreement, the Company agreed to issue to the holders an aggregate of 245,903 shares of common stock having a market value of $0.3 million.

On December 30, 2011, the Company entered into a Convertible Promissory Note Purchase Agreement (the "Note Purchase Agreement") with the Third Security Investors in the aggregate amount of $3.0 million. Under the Note Purchase Agreement, the Company sold to the Third Security Investors convertible notes that mature on March 31, 2012. The Note Purchase Agreement and notes provide for conversion of any amount remaining due to the Third Security Investors under the notes into equity securities of the Company of the same class(es) or series and at the same price as the equity securities of the Company sold in the Company's first sale or issuance of its equity securities after December 30, 2011, in the aggregate amount of at least $3.0 million. The notes and the equity securities into which the notes are convertible have not been registered under the Securities Act and applicable state securities laws, but have been offered and sold in the United States pursuant to applicable exemptions from registration requirements under the Securities Act and applicable state securities laws.

On February 2, 2012, the Company entered into a Securities Purchase Agreement with certain institutional and other accredited investors pursuant to which the Company: (i) sold to the investors an aggregate of 19,000,000 shares of the Company's common stock at a price per share of $1.00 for aggregate gross proceeds of approximately $19.0 million; and (ii) issued to the investors warrants to purchase up to an aggregate of 9,500,000 shares of common stock with an exercise price of $1.25 per share. The warrants may be exercised, in whole or in part, at any time from February 7, 2012 until February 7, 2017 and contain both cash and "cashless exercise" features. The warrants also impose penalties on the Company for failure to deliver the shares of common stock issuable upon exercise. The Securities Purchase Agreement also requires the filing by the Company of a registration statement with the SEC covering all shares issued and issuable under such Securities Purchase Agreement and imposes significant penalties for the failure to file such

registration statement by March 23, 2012. The Company currently intends to use the net proceeds from the offering for general corporate and working capital purposes, primarily to accelerate development of several of the company's key initiatives. The common stock and warrants were issued pursuant to applicable exemptions from registration requirements under the Securities Act and applicable securities law.

As part of the offering and, in connection with the conversion of certain convertible promissory notes in the aggregate amount of $3.0 million issued by the Company on December 30, 2011 to the Third Security Investors, the Third Security Investors collectively received 3,000,000 shares of common stock and warrants to purchase up to 1,500,000 shares of common stock upon the same terms as the investors.

Information with respect to the securities of the Company as described above sold by the Company during the period covered by this Annual Report and thereafter through the date of the filing of this Annual Report with the SEC that were not

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registered under the Securities Act has previously been provided in the Company's Current Reports on Form 8-K filed with the SEC on January 6, 2012, February 3, 2012 and February 7, 2012.

Issuer Purchase of Equity Securities. The Company made no purchases of its common stock during the year ended December 31, 2011. Therefore, tabular disclosure is not presented.

Item 6. Selected Consolidated Financial Data.

The selected consolidated balance sheet data as of December 31, 2011 and 2010 and the selected consolidated statements of operations data for each year ended December 31, 2011, 2010 and 2009 have been derived from our audited consolidated financial statements that are included elsewhere in this Annual Report on Form 10-K. The selected consolidated balance sheet data as of December 31, 2009, 2008 and 2007 and the selected consolidated statements of operations data for each year ended December 31, 2008 and 2007 have been derived from our audited consolidated financial statements that are not included in this Annual Report on Form 10-K. Dollar amounts, except per share data, are presented in thousands.

This data should be read together with Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations", and the consolidated financial statements and related notes included elsewhere in this Annual Report. The financial information below is not necessarily indicative of the results of future operations. Future results could differ materially from historical results due to may factors, including those discussed in Item 1A in the section entitled "Risk Factors."

	Year Ended December 31,				
	2011	2010	2009	2008	2007
Statement of Operations Data:					
Net sales	$31,971	$20,048	$22,023	$23,993	$23,176
Cost of good sold	13,534	10,284	10,418	10,345	10,483
Gross profit	18,437	9,764	11,605	13,648	12,693
Selling, general and administrative	19,150	10,933	10,319	10,795	11,466
Research and development	2,218	2,305	3,182	2,465	3,033
Restructuring charges [1]	41	138	—	118	1,516
Impairment charges [2]	—	—	—	638	—
Operating expenses	21,409	13,376	13,501	14,016	16,015
Other income (expense) [3]	(6,765)	628	18	86	1,391
Loss before income taxes	(9,737)	(2,984)	(1,878)	(282)	(1,931)
Income tax expense	45	150	42	213	243
Loss from continuing operations	(9,782)	(3,134)	(1,920)	(495)	(2,174)
Gain from discontinued operations, net of tax [4]	—	—	—	—	1,374
Net loss	$(9,782)	$(3,134)	$(1,920)	$(495)	$(800)
Preferred stock dividends and accretion [5]	(1,010)	—	—	—	—
Net loss available to common stockholders	$(10,792)	$(3,134)	$(1,920)	$(495)	$(800)
Basic and diluted loss per share:					
From continuing operations	$(0.22)	$(0.06)	$(0.04)	$(0.01)	$(0.05)
From discontinued operations	—	—	—	—	0.03
	$(0.22)	$(0.06)	$(0.04)	$(0.01)	$(0.02)
Basic and diluted weighted average shares outstanding	49,362	49,244	49,190	49,190	49,190
	As of December 31,				
	2011	2010	2009	2008	2007
Balance Sheet Data:					
Working capital	$870	$6,781	$10,351	$11,350	$11,316
Total assets	33,562	32,027	16,004	17,556	19,090
Total liabilities and mezzanine equity	22,514	23,527	4,342	4,351	4,988
Total stockholders' equity [6]	11,048	8,500	11,662	13,205	14,102

(1) Restructuring plans were implemented in 2010, 2008 and 2007 to reduce and align our expenses with current business prospects. The plans included employee terminations, office closures, termination of collaborations and write-offs of abandoned intellectual property. As a result, restructuring charges were recorded and are included in operating expenses.

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Refer to Note D to the accompanying consolidated financial statements.

(2) Impairment charges in 2008 relate to the impairment of goodwill.

(3) Other income (expense) for all years presented primarily includes interest expense, interest income and in 2011, expense associated with the "Series A Preferred Stock" and warrants to purchase shares of Series A Preferred Stock (the "Series A Warrants") of $6.1 million, which is due to the change in fair value of the preferred stock conversion feature. The expense associated with the change in value of the preferred stock conversion feature is a non-cash item. Other income in 2011 and 2010 includes $0.2 million and $0.6 million net of consulting fees, respectively, awarded in a federal grant under the Qualifying Therapeutic Discovery Project Program related to 2009 projects. Other income in 2007 includes $0.9 million from the sale of an investment security and $0.2 million in insurance proceeds related to equipment destroyed in a fire at our Cramlington, England facility.

(4) Discontinued Operations include a reclassification of $1.3 million for an adjustment to other comprehensive income related to the closure of the Nucleic Acids segment. In the fourth quarter of 2005, we implemented a plan to exit the Nucleic Acids operating segment which was primarily engaged in the manufacture of phosphoramadites and the raw materials to produce phosphoramadites which are used to produce synthetic DNA. The Nucleic Acids operating segment consisted primarily of a manufacturing facility in Glasgow, Scotland.

(5) For 2011, includes accrued dividends on Series A Preferred Stock of $0.6 million and Series A Preferred Stock accretion of $0.4 million.

(6) Reference Footnote Q. "Subsequent Events" to our accompanying consolidated financial statements for a pro forma analysis of our total stockholders' equity as of December 31, 2011 as the result of a private placement offering performed in February 2012 by the Company.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

This Management Discussion and Analysis contains forward-looking statements that involve risks and uncertainties. Please see the section entitled "Forward-Looking Statements" at the beginning of Item 1 and the section entitled "Risk Factors" under Item 1A for important information to consider when evaluating such statements.

You are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements we make are not guarantees of future performance and are subject to various assumptions, risks and other factors that could cause actual results to differ materially from those suggested by these forward-looking statements.

We expressly disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

Transgenomic, Inc. is a global biotechnology company advancing personalized medicine in the detection and treatment of cancer and inherited diseases through its proprietary molecular technologies and world-class clinical and research services. We have three complementary business segments.

- Clinical Laboratories. Our clinical laboratories specialize in genetic testing for cardiology, neurology, mitochondrial disorders, and oncology. Located in New Haven, Connecticut and Omaha, Nebraska the molecular clinical reference laboratories are certified under the Clinical Laboratory Improvement Amendment (CLIA) as high complexity labs and our Omaha facility is also accredited by the College of American Pathologists (CAP).
- Pharmacogenomics Services. Our Contract Research Organization located in Omaha, Nebraska provides pharmacogenomics research services supporting Phase II and Phase III clinical trials conducted by our pharmaceutical customers. This lab specializes in pharmacogenomic, biomarker and mutation discovery research serving the

pharmaceutical and biomedical industries world-wide for disease research, drug and diagnostic development and clinical trial support.

- Diagnostic Tools. Our proprietary product is the WAVE® System which has broad applicability to genetic variation detection in both molecular genetic research and molecular diagnostics. There is a worldwide installed base of over 1,500 WAVE Systems as of December 31, 2011. We also distribute bioinstruments produced by other manufacturers

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("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 bioconsumables that are required for the continued operation of the bioinstruments. We develop, manufacture and sell these bioconsumable products. In addition, we manufacture and sell consumable products that can be used on multiple, independent platforms. These products include SURVEYOR® Nuclease and a range of chromatography columns.

The following discussion should be read together with our financial statements and related notes contained in this report. Results for the year ended December 31, 2011 are not necessarily indicative of results that may be attained in the future.

Executive Summary

2011 Results

2011 vs. 2010 Dollars in Thousands

	Years Ended		Change		
	2011	2010	$	%	
Net sales	$31,971	$20,048	$11,923	59	%
Gross profit	18,437	9,764	8,673	89	%
Preferred stock and warrant expense	6,066	—	(6,066)	nm	
Net loss	(9,782)	(3,134)	(6,648)	212	%

Net sales for 2011 increased by $11.9 million or 59% compared to 2010. These results include revenues received from the FAMILION acquisition in our Clinical Laboratories segment. During 2011, net sales from Clinical Laboratories increased by $12.4 million compared to 2010. The Clinical Laboratories increase is a result of the revenue of $11.1 million related to the FAMILION acquisition. Net sales from Pharmacogenomics Services increased by $0.9 million for 2011 compared to 2010. Net sales in Diagnostic Tools were down 9% or $1.4 million for 2011 compared to 2010. Our gross profit margin increased from 49% for 2010 to 58% for 2011. Clinical Laboratories gross margin increased from 41% in 2010 to 59% for 2011. Loss from operations was $3.0 million for 2011 compared to $3.6 million for 2010.

During 2011, the Company recorded non-cash expense of $6.1 million associated with the Series A Preferred Stock and Series A Warrants. Such expense is due to the change in fair value of the preferred stock conversion feature.

2012 Outlook

We anticipate continued growth in 2012 in all three of our business units, Clinical Labs, Pharmacogenomic Services and Diagnostic Tools, as we commercialize new assay technologies and tests we have developed internally or in-licensed, and as we expand into other markets and regions worldwide. The foundation of these efforts was a successful 2011, driven by top line growth and the continued benefit of our FAMILION acquisition. Revenues increased by 59% to $32 million for the year ended December 31, 2011.

Our FAMILION franchise, which we acquired in December 2010, includes eleven tests for inherited cardiac disorders. We continue to believe that there is significant opportunity to expand this business based on increased use of existing tests and the launch of new products into the marketplace. In May, the Heart Rhythm Society issued new diagnostic guidelines supporting the use of some of our key cardiac tests. In November 2011, we launched two new genetic tests at the annual American Heart Association meeting. These include our PGxPredict:CLOPIDOGREL Panel, a uniquely comprehensive test to predict a patient's response to clopidogrel (Plavix®), the most widely prescribed antiplatelet drug used to reduce the risks of death, stroke and heart attack, and a test for familial atrial fibrillation.

The clopidogrel response test, in particular, is a significant opportunity for Transgenomic, as it is the only test which analyzes the genes CYP2C19 and ABCB1 to help predict a patient's ability to absorb and metabolize clopidogrel. Clopidogrel is taken in an inactive form, known as a prodrug, and must be absorbed through the intestine and then

metabolized by the liver to form the active drug in a process controlled by these genes. Patients with dysfunctional or lower functioning ABCB1 or CYP2C19 are at heightened risk for cardiovascular events than patients with normal protein function due to poorer availability of the active drug.

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The risk associated with dysfunctional or lower functioning CYP2C19 prompted the FDA in 2010 to add a black box warning to the clopidogrel label.

In March of 2012, Transgenomic announced the publication of a new study by researchers at Vanderbilt University in the journal “Clinical Pharmacology and Therapeutics.” This large, independent study, the third such study examining CYP2C19 and ABCB1, demonstrated the importance of both genes in determining which patients would benefit from treatment with clopidogrel and which should pursue alternative treatment. ABCB1 is proprietary to Transgenomic, protected by an issued patent in Europe and pending patent in the US. There are approximately 6 million new patients prescribed Plavix each year, of which about 47% will not fully benefit from their therapy because of genetic variations in either CYP2C19 or ABCB1. This highlights a need for broad-based testing, and represents a potential multi-billion dollar opportunity for Transgenomic's Clinical Laboratories division.

In June 2011, we launched our Nuclear Mitome Test, a 400-gene screen of the nuclear genes linked to mitochondrial function that provides useful clinical information in understanding the underlying genetic causes of this spectrum of diseases. This test has been well-received by mitochondrial experts and physicians already and is assisting them to better diagnose this serious and difficult to discern set of disorders.

In our Pharmacogenomics Services Unit, we continue to perform cancer pathway gene mutation analysis and other associated genomics service testing for a number of pharmaceutical companies: both for pre-clinical drug discovery projects and phase II and III clinical trials. Although we may experience variability in quarter-to-quarter revenues based on the timing of projects or when specimens may arrive, we continue to experience growth in this area of the business. We can now analyze a patient's blood serum rather than a tumor to detect DNA mutations, using our ultra-sensitive DNA mutation detection technology, termed “ICE COLD-PCR”. This is a significant achievement, and we believe it should lead to faster growth of our pharmacogenomics research services as pharmaceutical companies adopt this novel approach for both drug and disease research.

In addition to ICE COLD-PCR, which offers sensitivity improvements as much as 1,000 times higher than routine DNA testing technology, we have recently discovered a technique to further improve mutation detection sensitivity of standard Sanger sequencing. We have termed this new discovery “BLOCker-Sequencing” and we are combining this new discovery with our ICE COLD-PCR program to bring what we believe to be the most accurate and sensitive mutation detection technology available in the market today.

Results of Continuing Operations

Net Sales.

Net sales consisted of the following:

2011 vs. 2010	Dollars in Thousands				
	Years Ended		Change		
	2011	2010	$	%	
Clinical Laboratories	$16,038	$3,606	$12,432	345	%
Pharmacogenomic Services	2,280	1,373	907	66	%
Diagnostic Tools	13,653	15,069	(1,416)	(9)	)%
Total net sales	$31,971	$20,048	$11,923	59	%

Clinical Laboratories net sales increased $12.4 million during the year ended December 31, 2011, compared to the same period in 2010. Of this increase in revenue, $11.1 million is due to revenue from the FAMILION family of genetic tests, which we acquired on December 29, 2010. In addition, our revenue increased by $1.3 million in our neurology family of tests due to the mix of test performed and the average revenue per test.

Pharmacogenomic Services had net sales of $2.3 million during the year ended December 31, 2011, which increased $0.9 million compared to the same period in 2010. The increase is due to the completion of a significant project with a pharmaceutical company client. Pharmacogenomics Services net sales have peaks due to the nature of project-related services performed on behalf of our clients. Each period for Pharmacogenomics Services should be considered on a

stand alone basis and is not indicative of future net sales.

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Diagnostic Tools net sales decreased $1.4 million, or 9%, during the year ended December 31, 2011, as compared to the same period in 2010. The decrease was due to fewer systems sold in the year ended December 31, 2011. We sold thirteen WAVE Systems in 2011 compared to twenty-five in 2010. Demand for WAVE Systems has been affected by significant competitive challenges from traditional (i.e. sequencing) and evolving technologies. Lower WAVE System sales are offset by slightly higher OEM Equipment sales in 2011. We sold fourteen OEM Equipment instruments in the year ended December 31, 2011 compared to ten in the same period in 2010. Bioconsumables net sales were down $0.6 million, during the year ended December 31, 2011 compared to the same period in 2010 due to lower volume in Europe.

2010 vs. 2009 Dollars in Thousands

	Years Ended		Change	
	2010	2009	$	%
Clinical Laboratories	$3,606	$3,541	$65	2 %
Pharmacogenomic Services	1,373	1,025	348	34 %
Diagnostic Tools	15,069	17,457	(2,388)	(14)%
Total net sales	$20,048	$22,023	$(1,975)	(9)%

Clinical Laboratories net sales were consistent during the year ended December 31, 2010, compared to the same period in 2009.

Pharmacogenomic Services had net sales of $1.4 million during the year ended December 31, 2010, which increased $0.3 million compared to the same period in 2009. The increase is due to an increase in the number of clients and average revenue billed per client for the year ended December 31, 2010 compared to same period in 2009. Pharmacogenomics Services net sales have peaks due to the nature of project-related services performed on behalf of our clients. Each period for Pharmacogenomics Services should be considered on a stand alone basis and is not indicative of future net sales.

Diagnostic Tools net sales decreased $2.4 million, or 14%, during the year ended December 31, 2010 as compared to the same period in 2009. The decrease was due to fewer instruments sold in the year ended December 31, 2010. We sold twenty-five WAVE instruments in 2010 compared to thirty-two WAVE instruments in 2009. Demand for WAVE Systems has been affected by significant competitive challenges from traditional (i.e. sequencing) and evolving technologies. We sold ten OEM Equipment instruments in the year ended December 31, 2010 compared to eleven in the same period in 2009. Bioconsumables net sales were down $0.5 million, during the year ended December 31, 2010 compared to the same period in 2009 due to lower volume our European market offset by higher volume in our U.S. market.

Costs of Goods Sold.

Costs of goods sold include material costs for the products that we sell and substantially all other costs associated with our manufacturing facilities (primarily personnel costs, rent and depreciation) as well as the wholesale price we pay manufacturers of OEM Equipment that we distribute. It also includes direct costs (primarily personnel costs, rent, supplies and depreciation) associated with our Clinical Laboratories and Pharmacogenomics Services operations.

Gross Profit.

Gross profit and gross margins for each of our business segments were as follows:

2011 vs. 2010 Dollars in Thousands

	Years Ended		Margin %	
	2011	2010	2011	2010
Clinical Laboratories	$9,478	$1,481	59 %	41 %
Pharmacogenomic Services	1,050	(43)	46 %	(3)%
Diagnostic Tools	7,909	8,326	58 %	55 %
Gross profit	$18,437	$9,764	58 %	49 %

Gross profit was $18.4 million, or 58% , of total net sales during the year ended December 31, 2011, compared to $9.8

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million, or 49%, during the same period of 2010. During the year ended December 31, 2011, the gross margin for Clinical Laboratories was $9.5 million, or 59%, as compared to $1.5 million, or 41%, in the same period of 2010. The year ended December 31, 2011 includes gross profit from sales of the FAMILION family of genetic tests, which we acquired on December 29, 2010. Pharmacogenomics Services gross margin increased from a loss of less than $0.1 million, or (3)%, for the year ended December 31, 2010 to $1.1 million, or 46% for the year ended December 31, 2011. Pharmacogenomics Services have a relatively fixed-cost base so any increase or decrease in revenue directly impacts gross margins. In addition, operating supplies costs were lower in 2012 compared to 2011. Diagnostic Tools gross margin increased to 58% in the year ended December 31, 2011 from 55% in the same period of 2010 due to the change in mix of types of instruments sold.

2010 vs. 2009

Dollars in Thousands

	Years Ended		Margin %	
	2010	2009	2010	2009
Clinical Laboratories	$1,481	$1,523	41 %	43 %
Pharmacogenomic Services	(43)	205	(3)%	20 %
Diagnostic Tools	8,326	9,877	55 %	57 %
Gross profit	$9,764	$11,605	49 %	53 %

Gross profit was $9.8 million or 49% of total net sales during the year ended December 31, 2010, compared to $11.6 million, or 53%, during the same period of 2009. During the years ended December 31, 2010 and 2009, the gross margin for Clinical Laboratories was $1.5 million for both years and 41% and 43%, respectively. Pharmacogenomics Services gross margin decreased from $0.2 million, or 20% for the year ended December 31, 2009 to a loss of less than $0.1 million, or (3)% for the year ended December 31, 2010. The erosion in the Pharmacogenomics Services gross margin in 2010 compared to 2009 is due to higher operating supplies costs in 2010. Diagnostic Tools gross margin decreased to 55% for the year ended December 31, 2010 from 57% in the same period of 2009 due to lower bioconsumable sales, which also have a relatively fixed-cost base.

Operating expenses.

The following table summarizes operating expenses further described below for the years ended December 31, 2011, 2010 and 2009:

Dollars in Thousands

	Years Ended		
	2011	2010	2009
Selling, general and administrative	$19,150	$10,933	$10,319
Research and development	2,218	2,305	3,182
Restructuring charges	41	138	—
Total	$21,409	$13,376	$13,501

Selling, General and Administrative Expenses.

Selling, general and administrative expenses consist primarily of personnel costs, marketing, travel and entertainment costs, professional fees, and facility costs. In addition, the effect of foreign currency revaluation is included here. Our selling, general and administrative costs increased to $19.2 million, or 60% of net sales, from $10.9 million, or 55% of net sales, during the year ended December 31, 2011 compared to the same period in 2010. The increase in our selling, general and administrative costs is due primarily to (i) $4.9 million in expenses related to the FAMILION family of genetic tests, which we acquired on December 29, 2010, (ii) $1.0 million in expense related to the vesting of the employee stock option grants, (iii) $1.2 million in amortization of the acquired intangibles and (iv) bad debt expense of $1.7 million. Losses from foreign currency revaluation for the year ended December 31, 2011 were less than $0.1 million compared to losses of $0.3 million for the same period in 2010.

Selling, general and administrative expenses increased as a percentage of net sales from 47% in 2009 to 55% in 2010. For the year ended December 31, 2010 we incurred $0.8 million in expenses related to our acquisition of the FAMILION family of genetic tests. Selling, general and administrative expenses would have been $10.1 million for

the year ended December 31, 2010 excluding the deal costs to acquire the FAMILION family of genetic tests which would be comparable to selling, general and administrative expenses for the year ended December 31, 2009 of $10.3 million. Losses from foreign currency revaluation

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were $0.3 million in each of the periods ended December 31, 2010 and 2009. We recorded restructuring charges of $0.1 million in 2010 related to the consolidation of research and development into our facilities in Omaha, Nebraska which included closing the Gaithersburg, Maryland facility and the elimination of positions in our manufacturing group. There were no restructuring charges in 2009.

Research and Development Expenses.

Research and development expenses include primarily personnel costs, legal fees, outside services, collaboration expenses, supplies, and facility costs and are expensed in the period in which they are incurred. During the year ended December 31, 2011 and 2010 these costs totaled $2.2 million and $2.3 million, respectively. Research and development expenses totaled 7% and 11% of net sales during the year ended December 31, 2011 and 2010, respectively. The decrease is due primarily to the consolidation of our research and development activities in Omaha, Nebraska, the benefit which is partially offset by legal costs to defend a patent.

Research and development expenses totaled $2.3 million during the year ended December 31, 2010 compared to $3.2 million during the same period of 2009, a decrease of $0.9 million or 28%. The decrease is primarily due to expenses in 2009 related to collaboration expenses for NuroPro assay development related to the diagnosis of Alzheimer's and Parkinson's diseases, the development of high sensitivity mutation detection technology called Cold-PCR and purchases of samples related to research work in progress. As a percentage of net sales, research and development expenses totaled 11% and 14% of net sales during the years ended December 31, 2010 and 2009 respectively.

Research and development costs are expensed in the year in which they are incurred.

Other Income (Expense).

The following table summarizes other income (expense) for the years ended December 31, 2011, 2010 and 2009:

	Dollars in Thousands		
	Years Ended		
	2011	2010	2009
Interest income (expense)	$(958)	$(4)	$15
Expense on preferred stock and warrants	(6,066)	—	—
Other, net	259	632	3
Total other income (expense), net	$(6,765)	$628	$18

Other expense for the year ended December 31, 2011 totaled $6.8 million. Other expense includes interest expense as well as the expense associated with the Series A Preferred Stock and Series A Warrants, which is due to (i) the change in fair value of the preferred stock conversion feature and (ii) the consideration given to the owners of the Series A Convertible Preferred Stock in exchange for the Series A Preferred Stock Certificate Amendment. The expenses associated with the Series A Preferred Stock are non-cash items. Other income (expense) includes an award of a federal grant under the Qualifying Therapeutic Discovery Project of $0.2 million, net of consulting fees.

Other income in the year ended December 31, 2010 includes $0.6 million, net of consulting gees, relating to an award of a federal grant under the Qualifying Therapeutic Discovery Project. Other income for the year ended December 31, 2009 was less than $0.1 million.

Income Tax Expense (Benefit).

Income tax expense recorded during the years ended December 31, 2011, 2010 and 2009 related to income taxes in states, foreign countries and other local jurisdictions and totaled less than $0.1 million, $0.2 million and less than $0.1 million, respectively. The effective tax rate for the year ended December 31, 2011 is 0.5%, which is primarily the result of valuation allowances against net operating losses for the United States, partially adjusted by permanent differences related to inter-company foreign currency exchange of our subsidiary outside the United States. The effective tax rate for the years ended December 31, 2010 and 2009 were 5.0% and 2.2%, respectively.

A net deferred tax liability was recorded during 2011 and 2010 relating to the UK income taxes of less than $0.1 million . We will continue to assess the recoverability of deferred tax assets and the related valuation allowance. To the extent we begin to generate taxable income in future periods and determine that such valuation allowance is no longer required, the tax benefit of the remaining deferred tax assets will be recognized at such time. Our net operating loss carry-forwards from continuing and

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discontinued operations of $104.4 million will expire at various dates from 2012 through 2031, if not utilized. We also had state income tax loss carry-forwards from continuing and discontinued operations of $46.0 million at December 31, 2011. These carry-forwards will also expire at various dates if not utilized.

Liquidity and Capital Resources

Our working capital positions at December 31, 2011 and 2010 were as follows (in thousands):

	December 31, 2011	2010	Change
Current assets (including cash and cash equivalents of $4,946 and $3,454 respectively)	$17,198	$15,034	$2,164
Current liabilities	16,328	8,253	(8,075)
Working capital	$870	$6,781	$(5,911)

Working capital decreased from 2010 to 2011 primarily due to the following: 1) current maturities of long term debt increased $3.7 million, 2) the Company accrued dividends payable on its Series A Preferred Stock totaling $0.6 million, and 3) selected liability accounts including accounts payable, accrued compensation and other accrued liabilities increased on a net basis between year ends.

On December 30, 2011, the Company entered into a Convertible Promissory Note Purchase Agreement with the Third Security Investors in the aggregate amount of $3.0 million that automatically converted into shares of the Company's common stock and warrants to purchase such common stock on the same terms as all investors in the private placement described below.

On February 3, 2012 the Company entered into definitive agreements with institutional and other accredited investors to raise approximately $19.0 million (before offering costs and selling agent commissions) in a private placement. The funding occurred in February 2012. Pursuant to the terms of the private placement, we issued an aggregate of 19,000,000 shares of the Company's common stock at a price per share of $1.00 as well as five-year warrants to purchase up to an aggregate of 9,500,000 shares of common stock with an exercise price of $1.25 per share. As part of the private placement financing and in connection with the conversion of the convertible notes issued by the Company to the Third Security Investors, we issued an aggregate of 3,000,000 shares of common stock and 1,500,000 warrants on the same terms as all investors in the private placement.

Please see the section entitled "Contractual Obligations and Other Commitments" that follows shortly in this document and Footnote G. "Debt" to the accompanying consolidated financial statements for additional information regarding the Company's outstanding debt and debt servicing obligations. Additionally, see following paragraph describing subsequent funding received.

At December 31, 2011, we had cash and cash equivalents of $4.9 million and in February 2012we received approximately $17.5 million in connection with the private placement. We believe that existing sources of liquidity as of December 31, 2011 along with the net proceeds of the February 2012 private placement, are sufficient to meet expected cash needs. Accordingly, we believe we have sufficient liquidity to continue our operations for the foreseeable future.

Analysis of Cash Flows

The following table presents a summary of our cash flows:

	(amounts in thousands)		
	2011	2010	2009
Net cash provided by (used for):			
Operating activities	$220	$(1,718)	$1,267
Investing activities	(508)	(6,226)	(377)
Financing activities	1,726	5,761	—
Effect of exchange rates on cash	54	(5)	(19)
Net increase (decrease) in cash and cash equivalents	$1,492	$(2,188)	$871

Net Change in Cash and Cash Equivalents. Cash and cash equivalents increased by $1.5 million during 2011, decreased by $2.2 million during 2010 and increased by $0.9 million during 2009.

Cash Flows Provided By (Used In) Operating Activities. During 2011, the Company recorded non-cash, stock-based compensation expense totaling $1.0 million and $6.1 million of non-cash expense associated with the Series A Preferred Stock and

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Series A Warrants. The Company recorded non-cash, stock-based compensation expense of $0.0 million and $0.2 million during 2010 and 2009, respectively. The Company recorded depreciation and amortization expense totaling $2.1 million, $0.7 million and $0.9 million during 2011, 2010 and 2009, respectively.

Cash Flows Used In Investing Activities. During 2010, the Company acquired the FAMILION family of genetic tests for $6.0 in cash consideration. The Company recorded purchases of property and equipment totaling $0.2 million, $0.2 million and $0.4 million during 2011, 2010 and 2009, respectively.

Cash Flows Used in Financing Activities. During 2011, the Company recorded proceeds from short term notes payable totaling $3.0 million. During 2010, the Company raised $6.0 million in the issuance Series A Preferred Stock and Series A Warrants, which was used in the financing of the acquisition of FAMILION. The Company recorded principal payments on capital leases totaling $0.4 million and $0.1 million during 2011 and 2010, respectively. The Company recorded principal payments on notes payable totaling $0.9 million during 2011.

Contractual Obligations and Other Commitments

As of December 31, 2011, our contractual obligations and other commitments were as follows:

	(Amounts in thousands)						
	2012	2013	2014	2015	2016	After 2016	Total
Short term debt[1]	$3,082	$—	$—	$—	$—	$—	$3,082
Long term debt[1]	3,703	4,937	—	—	—	—	8,640
Interest[1]	900	307					1,207
Capital lease obligations[2]	378	312	97	—	—	—	787
Operating lease obligations[3]	1,103	1,023	978	914	866	2,094	6,978
Purchase obligations[4]	1,271	—	—	—	—	—	1,271
	$10,437	$6,579	$1,075	$914	$866	$2,094	$21,965

(1) See Note G - Debt
(2) See Note H - Capital Leases
(3) These amounts represent non-cancellable operating leases for equipment, vehicles and operating facilities
(4) These amounts represent purchase commitments, including all open purchase orders

Off Balance Sheet Arrangements

At December 31, 2011 and 2010, we did not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Critical Accounting Policies

Accounting policies used in the preparation of the consolidated financial statements may involve the use of management judgments and estimates. Certain of our accounting policies are considered critical as they are both important to the portrayal of our financial statements and they require significant or complex judgments on the part of management. The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of net sales and expenses during the reported period. In addition, estimates and assumptions associated with the determination of the fair value of certain assets and related impairments require considerable judgment by management. Our judgments and estimates are based on experience and assumptions that we believe are reasonable under the circumstances. Further, we evaluate our judgments and estimates from time to time as circumstances change. Actual financial results based on judgment or estimates may

vary under different assumptions or circumstances. The following are certain critical accounting policies that may involve the use of judgment or estimates.

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Allowance for Doubtful Accounts and Contractual Allowances. While payment terms are generally 30 days, we have also provided extended payment terms of up to 90 days in certain cases. We operate globally and some of the international payment terms may be greater than 90 days. Accounts receivable are carried at original invoice amount and shown net of allowance for doubtful accounts and contractual allowances. The estimate made for doubtful accounts is based on a review of all outstanding amounts on a quarterly basis. We determine the allowance for doubtful accounts and contractual allowances by regularly evaluating individual customer receivables and considering a customer's financial condition, credit history and current economic conditions. Accounts receivable are written off when deemed uncollectible. Recoveries of accounts receivable previously written off are recorded when received.

Inventories. Inventories are stated at the lower of cost or market net of allowance for obsolete inventory. Cost is computed using standard costs for finished goods and average or latest actual cost for raw materials and work in process, which approximates the first-in, first-out (FIFO) method. We write down slow-moving and obsolete inventory by the difference between the value of the inventory and our estimate of the reduced value based on potential future uses, the likelihood that overstocked inventory will be sold and the expected selling prices of the inventory. If our ability to realize value on slow-moving or obsolete inventory is less favorable than assumed, additional write-downs of the inventory may be required.

Property and Equipment. Property and equipment are carried at cost. Depreciation is computed by the straight-line method over the estimated useful lives of the related assets.

Goodwill. Goodwill is the excess of the purchase price over fair value of assets acquired and is not amortized. Goodwill is tested for impairment annually. We perform this impairment analysis during the fourth quarter of each year or when a significant event occurs that may impact goodwill. Impairment occurs when the carrying value is determined to be not recoverable thereby causing the carrying value of the goodwill to exceed its fair value. If impaired, the asset's carrying value is reduced to its fair value. No impairment existed at December 31, 2011 and 2010.

Intangibles.Intangibles include intellectual property, patents and acquired products.

1. Intellectual Property. Initial costs paid to license intellectual property from independent third parties are capitalized and amortized using the straight-line method over the license period. Ongoing royalties related to such licenses are expensed as incurred.

2. Patents. We capitalize legal costs, filing fees and other expenses associated with obtaining patents on new discoveries and amortize these costs using the straight-line method over the shorter of the legal life of the patent or its economic life beginning on the date the patent is issued.

3. Acquired Products. As a part of the FAMILION acquisition we acquired technology, in process technology, trademarks/tradenames and third party relationships. These costs will be amortized straight line over their estimated economic life of seven to eight years. See Footnote F.

The Company reviews its amortizable long lived assets annually for impairment or whenever events indicate that the carrying amount of the asset may not be recoverable. An impairment loss would be recorded if the sum of the future undiscounted cash flows is less than the carrying amount of the asset. The amount of the loss would be determined by comparing the fair market values of the asset to the carrying amount of the asset. No loss has been recorded during the years ended December 31, 2011 or 2010. In 2009, we recorded less than $0.1 million related to accelerated amortization on two license agreements that we terminated in the first quarter of 2010.

Indefinite lived assets will be tested for impairment on an annual basis or when a significant event occurs, which may impact impairment. We recorded no impairment during the year ended December 31, 2011, 2010 or 2009.

Preferred Stock. Prior to the 2011 modification, the Series A Preferred Stock met the definition of mandatorily redeemable stock as it was preferred capital stock which was redeemable at the option of the holder and therefore was reported outside of equity. The Series A Preferred Stock was accreted to its redemption value. Prior to the 2011 modification, the Series A Warrants did not qualify to be treated as equity, and accordingly, was recorded as a liability. A preferred stock conversion feature was embedded within the Series A Preferred Stock that met the definition of a derivative. The Series A Preferred Stock, Series A Warrants liability and Series A Preferred Stock conversion feature were all recorded separately and were initially recorded at fair value using the Black Scholes model. We were required to record these instruments at fair value at each reporting date and changes were recorded as

an adjustment to earnings. The Series A Warrant liability and Series A Preferred Stock conversion feature were considered level three financial instruments.

We entered into a transaction with the holders of the Series A Preferred Stock (the "Series A Holders"), pursuant to an

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Agreement Regarding Preferred Stock (the "Amendment Agreement"), in which the Series A Holders agreed to (i) waive their rights to enforce the anti-dilution and redemption features of the Series A Preferred Stock and (ii) at the next annual shareholder meeting, vote to amend the Certificate of Designation for the Series A Preferred Stock to remove the anti-dilution and redemption features of the Series A Preferred Stock. In exchange, the Company issued shares of common stock to the Series A Holders having an aggregate market value of $0.3 million.

As a result of the Amendment Agreement, the value of the Series A Preferred Stock and Series A Warrant, including the Series A Preferred Stock conversion feature and Series A Warrant liability, were reclassified into shareholders equity as of the date of the Amendment Agreement.

Stock Based Compensation. All stock options awarded to date have exercise prices equal to the market price of our common stock on the date of grant and have ten-year contractual terms. Unvested options as of December 31, 2011 had vesting periods of one or three years from date of grant. None of the stock options outstanding at December 31, 2011 are subject to performance or market-based vesting conditions.

We measure and recognize compensation expense for all stock-based awards made to employees and directors, including stock options. Compensation expense is based on the calculated fair value of the awards as measured at the grant date and is expensed ratably over the service period of the awards (generally the vesting period).

Income Taxes.Deferred tax assets and liabilities are determined based on the differences between the financial reporting and tax basis of assets and liabilities at each balance sheet date using tax rates expected to be in effect in the year the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance to the extent that it is more likely than not that they will not be realized. We had no material unrecognized tax benefits, interest, or penalties during fiscal 2011 or fiscal 2010, and we do not anticipate any such items during the next twelve months. Our policy is to record interest and penalties directly related to income taxes as income tax expense in the Consolidated Statements of Operations.

Net Sales Recognition.

Revenue is realized and earned when all of the following criteria are met:

- Persuasive evidence of an arrangement exists
- Delivery has occurred or services have been rendered
- The seller's price to the buyer is fixed or determinable, and
- Collectability is reasonably assured.

Net sales from our Clinical Laboratories are recognized on an individual test basis and takes place when the test report is completed, reviewed and sent to the client less the reserve for insurance, Medicare and Medicaid contractual adjustments. There are no deferred net sales associated with our Clinical Laboratories. Adjustments to the allowances, based on actual receipts from third party payers, are recorded upon settlement.

In our Pharmacogenomics Services, we perform services on a project by project basis. When we receive payment in advance, we recognize revenue when we deliver the service. These projects typically do not extend beyond one year.

Net sales of Diagnostic Tools products are recognized in accordance with the terms of the sales arrangement. Such recognition is based on receipt of an unconditional customer order and transfer of title and risk of ownership to the customer, typically upon shipment of the product under a purchase order. Our sales terms do not provide for the right of return unless the product is damaged or defective. Net sales from certain services associated with the analytical instruments, to be performed subsequent to shipment of the products, is deferred and recognized when the services are provided. Such services, mainly limited to installation and training services that are not essential to the functionality of the instruments, typically are performed in a timely manner subsequent to shipment of the instrument. We also enter into various service contracts that cover installed instruments. These contracts cover specific time periods and net sales associated with these contracts are deferred and recognized ratably over the service period.

Taxes collected from customers and remitted to government agencies for specific net sales producing transactions are recorded net with no effect on the income statement.

Research and Development. Research and development and various collaboration costs are charged to expense when incurred.

Translation of Foreign Currency. Our foreign subsidiary uses the local currency of the country in which it is located as its functional currency. Its assets and liabilities are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Revenues and expenses are translated at the average rates during the period.

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Comprehensive Income. Accumulated other comprehensive income at December 31, 2011, 2010 and 2009 consisted of foreign currency translation adjustments, net of applicable tax of zero. We deem our foreign investments to be permanent in nature and do not provide for taxes on currency translation adjustments arising from converting investments in a foreign currency to U.S. dollars. During 2011, we reclassified $1.3 million from accumulated other comprehensive income (loss) to accumulated deficit with no effect on total stockholders' equity or net loss.
Earnings Per Share. Basic earnings per share is calculated based on the weighted-average number of common shares outstanding during each period. Diluted earnings per share include shares issuable upon exercise of outstanding stock options, warrants or conversion rights that have exercise or conversion prices below the market value of our common stock.

Recent Accounting Pronouncements

Recently adopted accounting pronouncements.

In October 2009, the Financial Accounting Standards Board ("FASB") issued ASU No. 2009-13, Revenue Recognition (ASC 605): Multiple-Deliverable Revenue Arrangements (a consensus of the FASB Emerging Issues Task Force); effective for years beginning after June 15, 2010. Vendors often provide multiple products and/or services to their customers as part of a single arrangement. These deliverables may be provided at different points in time or over different time periods. The existing guidance regarding how and whether to separate these deliverables and how to allocate the overall arrangement consideration to each was originally captured in EITF Issue No. 00-21, Revenue Arrangements with Multiple Deliverables, which is now codified at ASC 605-25, Revenue Recognition – Multiple-Element Arrangements. The issuance of ASU 2009-13 amends ASC 605-25 and represents a significant shift from the existing guidance that was considered abuse-preventative and heavily geared toward ensuring that revenue recognition was not accelerated. The application of this new guidance is expected to result in accounting for multiple-deliverable revenue arrangements that better reflects their economics as more arrangements will be separated into individual units of accounting. Our adoption of ASU No. 2009-13 did not have a material impact on our consolidated financial statements.
In October 2009, the FASB issued ASU No. 2009-14, Software (ASC 985): Certain Revenue Arrangements That Include Software Elements (a consensus of the FASB Emerging Issues Task Force); effective for years beginning after June 15, 2010. ASU 2009-14 modifies the existing scope guidance in ASC 985-605, Software Revenue Recognition, for revenue arrangements with tangible products that include software elements. This modification was made primarily due to the changes in ASC 605-25 noted previously, which further differentiated the separation and allocation guidance applicable to non-software arrangements as compared to software arrangements. Prior to the modification of ASC 605-25, the separation and allocation guidance for software and non-software arrangements was more similar. Under ASC 985-605, which was originally issued as AICPA Statement of position 97-2, Software Revenue Recognition, an arrangement to sell a tangible product along with software was considered to be in its scope if the software was more than incidental to the product as a whole. Our adoption of ASU No. 2009-14 did not have a material impact on our consolidated financial statements.
In January 2010, the FASB issued guidance to amend the disclosure requirements related to fair value measurements, effective for years beginning after December 15, 2010. The guidance requires the disclosure of roll forward activities on purchases, sales, issuance, and settlements of the assets and liabilities measured using significant unobservable inputs (Level Three fair value measurements). We adopted the new disclosure provisions with the filing of our Form 10-Q for the three months ended March 31, 2011.

In December 2010, the FASB issued an Accounting Standards Update (“ASU”) to address diversity in practice in interpreting the pro forma revenue and earnings disclosure requirements for business combinations. The ASU specifies that if a public entity presents comparative financial statements, the entity should disclose revenue and earnings of the combined entity as though the current year business combination(s) had occurred as of the beginning of the comparable prior annual reporting period. We prospectively adopted this ASU effective January 1, 2011, with

no material impact on our consolidated financial statements.

Recently issued accounting pronouncements not yet adopted.

In June 2011, the FASB issued guidance on the presentation of comprehensive income. The new guidance eliminates the current option to report other comprehensive income and its components in the statement of changes in equity. Instead, an entity will be required to present either a continuous statement of net income and other comprehensive income or in two separate but consecutive statements. The new guidance is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2011 and will have presentation changes only.

In July 2011, the FASB issued guidance on the presentation of net patient service revenue. The new guidance requires a change in presentation of the statement of operations by reclassifying the provision for bad debts associated with patient service

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revenue from an operating expense to a deduction from patient service revenue (net of contractual allowances and discounts). Additionally, enhanced disclosure about policies for recognizing revenue and assessing bad debts are required. Disclosures of patient service revenue (net of contractual allowances and discounts) as well as qualitative and quantitative information about changes in the allowance for doubtful accounts will be required. The new guidance is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2011. We are in the final stages of analyzing this presentation of net patient service revenue.

In September 2011, the FASB issued guidance on intangibles including goodwill and other intangibles. The new guidance will allow an entity to first assess qualitative factors to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. The new guidance is effective for fiscal years beginning after December 15, 2011 and is expected to have no material impact on our consolidated financial statements.

Impact of Inflation

We do not believe that inflation has had a material effect on our current business, financial condition or results of operations. If our costs were to become subject to significant inflationary pressures, for example, if the cost of our materials or the cost of shipping our products to customers were to incur substantial increases as a result of the rapid rise in the cost of oil, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could harm our business, financial condition and results of operations.

Item 7A. Quantitative and Qualitative Disclosure about Market Risk.

Foreign Currency Translation Risk. Sales of products in foreign countries are mainly completed in either British Pounds Sterling or the Euro. Additionally, the British Pound Sterling is the functional currency of our wholly owned subsidiary, Transgenomic Limited. Results of operations and the Balance Sheet are translated from the functional currency of the subsidiary to our reporting currency of the US Dollar. Results of operations for the Company’s foreign subsidiaries are translated using the average exchange rate during the period. Assets and liabilities are translated at the exchange rate in effect at the balance sheet date. In addition, we have revaluation risk which occurs when the transaction is consummated in a currency other than the British Pound Sterling. This transaction must be revalued within the Transgenomic Limited ledger, whose functional currency is the British Pound Sterling. The majority of the transactions on this ledger are in Euro. As a result we are subject to exchange rate risk and we do not currently engage in foreign currency hedging activities.

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders
Transgenomic, Inc.

We have audited the accompanying consolidated balance sheets of Transgenomic, Inc. and Subsidiary (the Company) as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2011. We also have audited the Company's internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on these financial statements and an opinion on the Company's internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (a) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (b) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (c) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Transgenomic, Inc. and Subsidiary as of December 31, 2011 and 2010, and the results of their

operations and their cash flows for each of the years in the three year period ended December 31, 2011, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, Transgenomic, Inc. and Subsidiary maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

/s/ McGladrey & Pullen, LLP

Omaha, Nebraska
March 14, 2012

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TRANSGENOMIC, INC. AND SUBSIDIARY
CONSOLIDATED BALANCE SHEETS
December 31, 2011 and 2010
(Dollars in thousands except per share data)

	2011	2010
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$4,946	$3,454
Accounts receivable (net of allowances for bad debts of $1,088 and $334, respectively)	7,573	7,601
Inventories (net of allowances for obsolescence of $511 and $518, respectively)	3,859	3,344
Other current assets	820	635
Total current assets	17,198	15,034
PROPERTY AND EQUIPMENT:		
Equipment	10,143	9,820
Furniture, fixtures & leasehold improvements	3,682	3,479
	13,825	13,299
Less: accumulated depreciation	(11,969)	(11,697)
	1,856	1,602
OTHER ASSETS:		
Goodwill	6,440	6,275
Intangibles (net of accumulated amortization of $1,437 and $519, respectively)	7,966	8,962
Other assets	102	154
	$33,562	$32,027
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
CURRENT LIABILITIES:		
Accounts payable	$2,609	$1,360
Accrued compensation	1,133	875
Short term debt	3,082	989
Current maturities of long term debt	3,703	—
Accrued expenses	3,839	3,231
Other Liabilities	1,042	1,628
Current portion of lease obligations	320	170
Accrued preferred stock dividend	600	—
Total current liabilities	16,328	8,253
LONG TERM LIABILITIES:		
Long term debt less current maturities	4,937	8,640
Preferred stock conversion feature	—	1,983
Preferred stock warrant liability	—	2,351
Other long-term liabilities	1,249	843
Total liabilities	22,514	22,070
Redeemable Series A convertible preferred stock, $.01 par value, 3,879,307 shares authorized, 0 and 2,586,205 shares issued and outstanding, respectively	—	1,457
STOCKHOLDERS' EQUITY:		
Series A preferred stock, $.01 par value, 15,000,000 shares authorized, 2,586,205 and 0 shares issued and outstanding, respectively	26	—
Common stock, $.01 par value, 100,000,000 shares authorized, 49,625,725 and 49,289,672 shares issued and outstanding, respectively	501	498

Additional paid-in capital	152,987	139,730
Accumulated other comprehensive income	336	1,589
Accumulated deficit	(142,802)	(133,317)
Total stockholders' equity	11,048	8,500
	$33,562	$32,027

See notes to consolidated financial statements.

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TRANSGENOMIC, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF OPERATIONS
Years Ended December 31, 2011, 2010 and 2009
(Dollars in thousands except per share data)

	2011	2010	2009
NET SALES	$31,971	$20,048	$22,023
COST OF GOODS SOLD	13,534	10,284	10,418
Gross profit	18,437	9,764	11,605
OPERATING EXPENSES:			
Selling, general and administrative	19,150	10,933	10,319
Research and development	2,218	2,305	3,182
Restructuring charges	41	138	—
	21,409	13,376	13,501
LOSS FROM OPERATIONS	(2,972)	(3,612)	(1,896)
OTHER INCOME (EXPENSE):			
Interest income (expense), net	(958)	(4)	15
Expense on preferred stock	(6,066)	—	—
Other, net	259	632	3
	(6,765)	628	18
LOSS BEFORE INCOME TAXES	(9,737)	(2,984)	(1,878)
INCOME TAX EXPENSE	45	150	42
NET LOSS	$(9,782)	$(3,134)	$(1,920)
PREFERRED STOCK DIVIDENDS AND ACCRETION	(1,010)	—	—
NET LOSS AVAILABLE TO COMMON STOCKHOLDERS	$(10,792)	$(3,134)	$(1,920)
BASIC AND DILUTED LOSS PER COMMON SHARE	$(0.22)	$(0.06)	$(0.04)
BASIC AND DILUTED WEIGHTED AVERAGE SHARES OF COMMON STOCK OUTSTANDING	49,361,632	49,243,839	49,189,672

See notes to consolidated financial statements.

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TRANSGENOMIC, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
Years Ended December 31, 2011, 2010 and 2009
(Dollars in thousands except share data)

	Preferred Stock		Common Stock					
	Outstanding Shares	Par Value	Outstanding Shares	Par Value	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total
Balance, January 1, 2009	—	—	49,189,672	$497	$139,501	$ (128,263)	$ 1,470	$13,205
Net loss	—	—	—	—	—	(1,920)	(1,920)	(1,920)
Other comprehensive income (loss):								
Foreign currency translation adjustment, net of tax	—	—	—	—	—	—	175	175
Comprehensive loss							$ (1,745)	
Non-cash stock-based compensation	—	—	—	—	202	—	—	202
Balance, December 31, 2009	—	—	49,189,672	$497	$139,703	$ (130,183)	$ 1,645	$11,662
Net loss	—	—	—	$—	$—	$ (3,134)	$ (3,134)	$(3,134)
Other comprehensive income (loss):								
Foreign currency translation adjustment, net of tax	—	—	—	—	—	—	(56)	(56)
Comprehensive loss							$ (3,190)	
Non-cash stock-based compensation	—	—	—	—	(14)	—	—	(14)
Issuance of shares of stock	—	—	100,000	1	41	—	—	42
Balance, December 31, 2010	—	—	49,289,672	$498	$139,730	$ (133,317)	$ 1,589	$8,500
Net loss	—	—	—	—	—	(9,782)	(9,782)	(9,782)
Other comprehensive income (loss):								
Foreign currency translation adjustment, net of tax	—	—	—	—	—	—	54	54
Comprehensive loss							$ (9,728)	

Non-cash stock-based compensation	—	—	—	—	1,010	—	—	1,010
Issuance of shares of common stock	—	—	90,150	1	23	—	—	24
Preferred stock accretion	—	—	—	—	—	(410)	—	(410)
Amendment of preferred stock agreement	2,586,205	26	245,903	2	12,224	—	—	12,252
Reclassification of other comprehensive income (loss)	—	—	—	—	—	1,307	(1,307)	—
Dividends on preferred stock	—	—	—	—	—	(600)	—	(600)
Balance, December 31, 2011	2,586,205	$26	49,625,725	$501	$152,987	$ (142,802)	$ 336	$11,048

See notes to consolidated financial statements.

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TRANSGENOMIC, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CASH FLOWS
Years Ended December 31, 2011, 2010 and 2009
(Dollars in thousands)

	2011	2010	2009
CASH FLOWS PROVIDED BY (USED IN) OPERATING ACTIVITIES:			
Net loss	$(9,782)	$(3,134)	$(1,920)
Adjustments to reconcile net loss to net cash flows provided by (used in) operating activities:			
Depreciation and amortization	2,101	708	852
Non-cash, stock based compensation	1,010	(14)	202
Provision for losses on doubtful accounts	1,738	28	(8)
Provision for losses on inventory obsolescence	48	100	482
Preferred stock revaluation	6,066	—	—
Changes in operating assets and liabilities:			
Accounts receivable	(2,212)	44	1,121
Inventories	(620)	(3)	808
Prepaid expenses and other current assets	243	95	(60)
Accounts payable	1,028	364	60
Accrued liabilities	332	92	(401)
Other long term liabilities	401	(24)	109
Long term deferred income taxes	(133)	26	22
Net cash flows provided by (used in) operating activities	220	(1,718)	1,267
CASH FLOWS USED IN INVESTING ACTIVITIES:			
Acquisitions	—	(6,000)	—
Purchase of property and equipment	(231)	(192)	(351)
Change in other assets	(277)	(34)	(26)
Net cash flows used in investing activities	(508)	(6,226)	(377)
CASH FLOWS PROVIDED BY (USED IN) FINANCING ACTIVITIES:			
Issuance of preferred stock and related warrants	—	6,000	—
Stock issuance costs	—	(209)	—
Proceeds from note payable	3,000	—	—
Principal payments on capital lease obligations	(391)	(72)	—
Issuance of common stock	24	42	—
Principal payment on note payable	(907)	—	—
Net cash flows provided by financing activities	1,726	5,761	—
EFFECT OF FOREIGN CURRENCY EXCHANGE RATE CHANGES ON CASH	54	(5)	(19)
NET CHANGE IN CASH AND CASH EQUIVALENTS	1,492	(2,188)	871
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	3,454	5,642	4,771
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$4,946	$3,454	$5,642
SUPPLEMENTAL CASH FLOW INFORMATION			
Cash paid during the period for:			
Interest	$732	$7	$—
Income taxes, net	108	29	163
SUPPLEMENTAL DISCLOSURE OF NON-CASH INFORMATION			
Acquisition of equipment through capital leases	$756	$394	$—
Dividends accrued on preferred stock	600	—	—
Common stock issued for elimination of derivatives on preferred stock	300	—	—

Goodwill purchase price adjustment	165	—	—

See notes to consolidated financial statements.

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TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Years Ended December 31, 2011, 2010 and 2009

A. BUSINESS DESCRIPTION

Business Description.

Transgenomic, Inc. is a global biotechnology company advancing personalized medicine in the detection and treatment of cancer and inherited diseases through its proprietary molecular technologies and world-class clinical and research services. Our operations are organized and reviewed by management along its product lines and presented in the following three complementary business segments.

- Clinical Laboratories. Our clinical laboratories specialize in genetic testing for cardiology, neurology, mitochondrial disorders, and oncology. Located in New Haven, Connecticut and Omaha, Nebraska the molecular clinical reference laboratories are certified under the Clinical Laboratory Improvement Amendment (CLIA) as high complexity labs and our Omaha facility is also accredited by the College of American Pathologists (CAP).
- Pharmacogenomics Services. Our Contract Research Organization located in Omaha, Nebraska provides pharmacogenomics research services supporting Phase II and Phase III clinical trials conducted by our pharmaceutical customers. This lab specializes in pharmacogenomic, biomarker and mutation discovery research serving the pharmaceutical and biomedical industries world-wide for disease research, drug and diagnostic development and clinical trial support.
- Diagnostic Tools. Our proprietary product is the WAVE® System which has broad applicability to genetic variation detection in both molecular genetic research and molecular diagnostics. There is a worldwide installed base of over 1,500 WAVE Systems as of December 31, 2011. We also distribute bioinstruments 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 bioinstruments. 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 SURVEYOR® Nuclease and a range of chromatography columns.

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation.

The consolidated financial statements include the accounts of Transgenomic, Inc. and its wholly owned subsidiary. All inter-company balances and transactions have been eliminated in consolidation.

Risks and Uncertainties.

Certain risks and uncertainties are inherent in our day-to-day operations and to the process of preparing our financial statements. The more significant of those risks are presented below and throughout the notes to the financial statements.

Use of Estimates.

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of net sales and expenses during the reporting period. In addition, estimates and assumptions associated with the determination of the fair value of certain assets and related impairments require considerable judgment by management. Actual results could differ from the estimates and assumptions used in preparing these consolidated financial statements.

Reclassifications.

Certain prior year amounts have been reclassified in order to conform to the current year presentation.

Fair Value.
Unless otherwise specified, book value approximates fair market value. The Series A Preferred Stock conversion feature and Series A Warrant liability are recorded at fair value. See Footnote N.

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TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Years Ended December 31, 2011, 2010 and 2009

Cash and Cash Equivalents.
Cash and cash equivalents include cash and investments with original maturities at the date of acquisition of three months or less. Such investments presently consist of temporary overnight investments

Concentrations of Cash.
From time to time, we may maintain a cash position with financial institutions in amounts that exceed federally insured limits. We have not experienced any losses on such accounts as of December 31, 2011.
Accounts Receivable.
The following is a summary of activity for the allowance for doubtful accounts during the year ended December 31, 20112010 and 2009:

	Dollars in Thousands			
	Beginning Balance	Provision	Write Offs	Ending Balance
Year Ended December 31, 2011	$334	$1,738	$(984)	$1,088
Year Ended December 31, 2010	$310	$28	$(4)	$334
Year Ended December 31, 2009	$388	$(8)	$(70)	$310

While payment terms are generally 30 days, we have also provided extended payment terms of up to 90 days in certain cases. We operate globally and some of the international payment terms may be greater than 90 days. Accounts receivable are carried at original invoice amount and shown net of allowance for doubtful accounts and contractual allowances. The estimate made for doubtful accounts is based on a review of all outstanding amounts on a quarterly basis. We determine the allowance for doubtful accounts and contractual allowances by regularly evaluating individual customer receivables and considering a customer's financial condition, credit history and current economic conditions. Accounts receivable are written off when deemed uncollectible. Recoveries of accounts receivable previously written off are recorded when received.
Inventories.
Inventories are stated at the lower of cost or market net of allowance for obsolete inventory. Cost is computed using standard costs for finished goods and average or latest actual cost for raw materials and work in process, which approximates the first-in, first-out (FIFO) method. We write down slow-moving and obsolete inventory by the difference between the value of the inventory and our estimate of the reduced value based on potential future uses, the likelihood that overstocked inventory will be sold and the expected selling prices of the inventory. If our ability to realize value on slow-moving or obsolete inventory is less favorable than assumed, additional write-downs of the inventory may be required.

The following is a summary of activity for the allowance for obsolete inventory during the year ended December 31, 2011, 2010 and 2009:

	Dollars in Thousands			
	Beginning Balance	Provision	Write Offs	Ending Balance
Year Ended December 31, 2011	$518	$48	$(55)	$511
Year Ended December 31, 2010	$507	$100	$(89)	$518
Year Ended December 31, 2009	$108	$482	$(83)	$507

We determine the allowance for obsolescence by evaluating inventory quarterly for items deemed to be slow moving or obsolete.

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TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Years Ended December 31, 2011, 2010 and 2009

Property and Equipment.
Property and equipment are carried at cost. Depreciation is computed by the straight-line method over the estimated useful lives of the related assets as follows:

Leasehold improvements	1 to 10 years
Furniture and fixtures	3 to 7 years
Production equipment	3 to 7 years
Computer equipment	3 to 7 years
Research and development equipment	2 to 7 years

Depreciation expense related to property and equipment during the years ended December 31, 2011, 2010 and 2009 was $0.6 million, $0.4 million and $0.6 million, respectively. Included in depreciation for the years ended December 31, 2011, 2010 and 2009 was $0.2 million, less than $0.1 million and $0.0 million, respectively, related to equipment acquired under capital leases.
Goodwill.
Goodwill is the excess of the purchase price over fair value of assets acquired and is not amortized. Goodwill is tested for impairment annually. We perform this impairment analysis during the fourth quarter of each year or when a significant event occurs that may impact goodwill. Impairment occurs when the carrying value is determined to be not recoverable thereby causing the carrying value of the goodwill to exceed its fair value. If impaired, the asset's carrying value is reduced to its fair value. No impairment existed at December 31, 2011 and 2010.
Intangibles.
Intangibles include intellectual property, patents and acquired products.
1. Intellectual Property. Initial costs paid to license intellectual property from independent third parties are capitalized and amortized using the straight-line method over the license period. Ongoing royalties related to such licenses are expensed as incurred.
2. Patents. We capitalize legal costs, filing fees and other expenses associated with obtaining patents on new discoveries and amortize these costs using the straight-line method over the shorter of the legal life of the patent or its economic life beginning on the date the patent is issued.
3. Acquired Products. As a part of the FAMILION acquisition we acquired technology, in process technology, trademarks/tradenames and third party relationships. These costs will be amortized straight line over their estimated economic life of seven to eight years. See Footnote F.
The Company reviews its amortizable long lived assets annually for impairment or whenever events indicate that the carrying amount of the asset may not be recoverable. An impairment loss would be recorded if the sum of the future undiscounted cash flows is less than the carrying amount of the asset. The amount of the loss would be determined by comparing the fair market values of the asset to the carrying amount of the asset. No loss has been recorded during the years ended December 31, 2011 or 2010. In 2009, we recorded less than $0.1 million related to accelerated amortization on two license agreements that we terminated in the first quarter of 2010.
Indefinite lived assets will be tested for impairment on an annual basis or when a significant event occurs, which may impact impairment. We recorded no impairment during the year ended December 31, 2011, 2010 or 2009.
Preferred Stock. Prior to the 2011 modification, the Series A Preferred Stock met the definition of mandatorily redeemable stock as it was preferred capital stock which was redeemable at the option of the holder and therefore was reported outside of equity. The Series A Preferred Stock was accreted to its redemption value. Prior to the 2011 modification, the Series A Warrants did not qualify to be treated as equity, and accordingly, was recorded as a liability. A preferred stock conversion feature was embedded within the Series A Preferred Stock that met the definition of a derivative. The Series A Preferred Stock, Series A Warrants liability and Series A Preferred Stock conversion feature were all recorded separately and were initially recorded at fair value using the Black Scholes model. We were required to record these instruments at fair value at each reporting date and changes were recorded as

an adjustment to earnings. The Series A Warrant liability and Series A Preferred Stock conversion feature were

considered level three financial instruments.

We entered into a transaction with the holders of the Series A Preferred Stock (the "Series A Holders"), pursuant to an Agreement Regarding Preferred Stock (the “Amendment Agreement”), in which the Series A Holders agreed to (i) waive their rights to enforce the anti-dilution and redemption features of the Series A Preferred Stock and (ii) at the next annual shareholder meeting, vote to amend the Certificate of Designation for the Series A Preferred Stock to remove the anti-dilution and redemption features of the Series A Preferred Stock. In exchange, the Company issued shares of common stock to the Series A Holders having an aggregate market value of $0.3 million.

As a result of the Amendment Agreement, the value of the Series A Preferred Stock and Series A Warrant, including the Series A Preferred Stock conversion feature and Series A Warrant liability, were reclassified into shareholders equity as of the date of the Amendment Agreement.

Stock Based Compensation.

All stock options awarded to date have exercise prices equal to the market price of our common stock on the date of grant and have ten-year contractual terms. Unvested options as of December 31, 2011 had vesting periods of one or three years from date of grant. None of the stock options outstanding at December 31, 2011 are subject to performance or market-based vesting conditions.

We measure and recognize compensation expense for all stock-based awards made to employees and directors, including stock options. Compensation expense is based on the calculated fair value of the awards as measured at the grant date and is expensed ratably over the service period of the awards (generally the vesting period).

Income Taxes.

Deferred tax assets and liabilities are determined based on the differences between the financial reporting and tax basis of assets and liabilities at each balance sheet date using tax rates expected to be in effect in the year the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance to the extent that it is more likely than not that they will not be realized. We had no material unrecognized tax benefits, interest, or penalties during fiscal 2011 or fiscal 2010, and we do not anticipate any such items during the next twelve months. Our policy is to record interest and penalties directly related to income taxes as income tax expense in the Consolidated Statements of Operations.

Net Sales Recognition.

Revenue is realized and earned when all of the following criteria are met:

- Persuasive evidence of an arrangement exists
- Delivery has occurred or services have been rendered
- The seller’s price to the buyer is fixed or determinable, and
- Collectability is reasonably assured.

Net sales from our Clinical Laboratories are recognized on an individual test basis and takes place when the test report is completed, reviewed and sent to the client less the reserve for insurance, Medicare and Medicaid contractual adjustments. There are no deferred net sales associated with our Clinical Laboratories. Adjustments to the allowances, based on actual receipts from third party payers, are recorded upon settlement.

In our Pharmacogenomics Services, we perform services on a project by project basis. When we receive payment in advance, we recognize revenue when we deliver the service. These projects typically do not extend beyond one year. At December 31, 2011 and 2010, deferred net sales associated with pharmacogenomics research projects, included in the balance sheet in other accrued expenses, was $0.1 million and less than $0.1 million, respectively.

Net sales of Diagnostic Tools products are recognized in accordance with the terms of the sales arrangement. Such recognition is based on receipt of an unconditional customer order and transfer of title and risk of ownership to the customer, typically upon shipment of the product under a purchase order. Our sales terms do not provide for the right of return unless the product is damaged or defective. Net sales from certain services associated with the analytical

instruments, to be performed subsequent to shipment of the products, is deferred and recognized when the services are provided. Such services, mainly limited to installation and training services that are not essential to the functionality of the instruments, typically are performed in a timely manner subsequent to shipment of the instrument. We also enter into various service contracts that cover installed instruments. These contracts cover specific time periods and net sales associated with these contracts are deferred and recognized ratably over the service period. At

December 31, 2011 and 2010, deferred net sales, mainly associated with our service contracts, included in the balance sheet in accrued expenses was approximately $1.3 million and $1.4 million, respectively.

Taxes collected from customers and remitted to government agencies for specific net sales producing transactions are recorded net with no effect on the income statement.

Research and Development.

Research and development and various collaboration costs are charged to expense when incurred.

Preferred Stock.

The Series A Preferred Stock met the definition of mandatorily redeemable stock as it is preferred capital stock which is redeemable at the option of the holder and should be reported outside of equity. The Series A Preferred Stock is accreted to its redemption value. The Series A Warrants do not qualify to be treated as equity, and accordingly, are recorded as a liability. A preferred stock conversion feature is embedded within the Series A Preferred Stock that meets the definition of a derivative. The Series A Preferred Stock, Series A Warrants liability and Series A Preferred Stock conversion feature are all recorded separately and were initially recorded at fair value using the Black Scholes model. We are required to record these instruments at fair value at each reporting date and changes will be recorded as an adjustment to earnings. The Series A Warrant liability and Series A Preferred Stock conversion feature are considered level three financial instruments.

We entered into a transaction with the holders of the Series A Preferred Stock (the "Series A Holders"), pursuant to an Agreement Regarding Preferred Stock (the “Amendment Agreement”), in which the Series A Holders agreed to (i) waive their rights to enforce the anti-dilution and redemption features of the Series A Preferred Stock and (ii) at the next annual shareholder meeting, vote to amend the Certificate of Designation for the Series A Preferred Stock to remove the anti-dilution and redemption features of the Series A Preferred Stock. In exchange, the Company issued shares of common stock to the Series A Holders having an aggregate market value of $0.3 million.

As a result of the Amendment Agreement, the value of the Series A Preferred Stock and Series A Warrant, including the Series A Preferred Stock conversion feature and Series A Warrant liability, were reclassified into shareholders equity as of the date of the Amendment Agreement.

Translation of Foreign Currency.

Our foreign subsidiary uses the local currency of the country in which it is located as its functional currency. Its assets and liabilities are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. A translation gain of $0.1 million is reported in other comprehensive income on the accompanying consolidated balance sheet as of December 31, 2011. A translation loss of $0.1 million was reported in other comprehensive income on the accompanying consolidated balance sheet as of December 31, 2010. Revenues and expenses are translated at the average rates during the period. For transactions that are not denominated in the functional currency, we recognized less than $0.1million, $0.3 million and $0.3 million as foreign currency transaction loss in the determination of net loss for the years ending December 31, 2011, 2010 and 2009, respectively.

Expense on Preferred Stock.

For 2011, we recorded expense associated with the Series A Preferred Stock and Series A Warrants of $6.1 million, which is due to the change in fair value of the Series A Preferred Stock conversion feature and Series A Warrants liability of $5.8 million and the issuance of $0.3 million in common stock to the Series A Investors. The expense associated with the change in value of the Series A Preferred Stock conversion feature is a non-cash item. There was no expense on preferred stock in 2010 or 2009.

Other Income.

Other income in the years ended December 31, 2011 and 2010 includes an award of a federal grant under the Qualifying Therapeutic Discovery Project related to COLD-PCR, Surveyor Scan kit development for detecting key cancer pathway gene mutations and mtDNA damage assays. Income related to this federal grant net of consulting fees was $0.2 million and $0.6 million, respectively.

Comprehensive Income.

Accumulated other comprehensive income at December 31, 2011, 2010 and 2009 consisted of foreign currency translation

adjustments, net of applicable tax of zero. We deem our foreign investments to be permanent in nature and do not provide for taxes on currency translation adjustments arising from converting investments in a foreign currency to U.S. dollars. During 2011, we reclassified $1.3 million from accumulated other comprehensive income (loss) to accumulated deficit with no effect on total stockholders' equity or net loss.

Earnings Per Share.

Basic earnings per share is calculated based on the weighted-average number of common shares outstanding during each period. Diluted earnings per share include shares issuable upon exercise of outstanding stock options, warrants or conversion rights that have exercise or conversion prices below the market value of our common stock. Options, warrants and conversion rights pertaining to 17,648,273, 18,607,229 and 11,309,887 shares of our common stock have been excluded from the computation of diluted earnings per share at December 31, 2011, 2010 and 2009, respectively. The options, warrants and conversion rights that were exercisable in 2011, 2010 and 2009 were not included because the effect would be anti-dilutive due to the net loss.

Recently Issued Accounting Pronouncements.

In October 2009, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2009-13, Revenue Recognition (ASC 605): Multiple-Deliverable Revenue Arrangements (a consensus of the FASB Emerging Issues Task Force); effective for years beginning after June 15, 2010. Vendors often provide multiple products and/or services to their customers as part of a single arrangement. These deliverables may be provided at different points in time or over different time periods. The existing guidance regarding how and whether to separate these deliverables and how to allocate the overall arrangement consideration to each was originally captured in EITF Issue No. 00-21, Revenue Arrangements with Multiple Deliverables, which is now codified at ASC 605-25, Revenue Recognition – Multiple-Element Arrangements. The issuance of ASU 2009-13 amends ASC 605-25 and represents a significant shift from the existing guidance that was considered abuse-preventative and heavily geared toward ensuring that revenue recognition was not accelerated. The application of this new guidance is expected to result in accounting for multiple-deliverable revenue arrangements that better reflects their economics as more arrangements will be separated into individual units of accounting. Our adoption of ASU No. 2009-13 did not have a material impact on our consolidated financial statements.

In October 2009, the FASB issued ASU No. 2009-14, Software (ASC 985): Certain Revenue Arrangements That Include Software Elements (a consensus of the FASB Emerging Issues Task Force); effective for years beginning after June 15, 2010. ASU 2009-14 modifies the existing scope guidance in ASC 985-605, Software Revenue Recognition, for revenue arrangements with tangible products that include software elements. This modification was made primarily due to the changes in ASC 605-25 noted previously, which further differentiated the separation and allocation guidance applicable to non-software arrangements as compared to software arrangements. Prior to the modification of ASC 605-25, the separation and allocation guidance for software and non-software arrangements was more similar. Under ASC 985-605, which was originally issued as AICPA Statement of position 97-2, Software Revenue Recognition, an arrangement to sell a tangible product along with software was considered to be in its scope if the software was more than incidental to the product as a whole. Our adoption of ASU No. 2009-14 did not have a material impact on our consolidated financial statements.

In January 2010, the FASB issued guidance to amend the disclosure requirements related to fair value measurements, effective for years beginning after December 15, 2010. The guidance requires the disclosure of roll forward activities on purchases, sales, issuance, and settlements of the assets and liabilities measured using significant unobservable inputs (Level Three fair value measurements). We adopted the new disclosure provisions with the filing of our Form 10-Q for the three months ended March 31, 2011.

In December 2010, the FASB issued an ASU to address diversity in practice in interpreting the pro-forma revenue and earnings disclosure requirements for business combinations. The ASU specifies that if a public entity presents comparative financial statements, the entity should disclose revenue and earnings of the combined entity as though the

current year business combination(s) had occurred as of the beginning of the comparable prior annual reporting period. We prospectively adopted this ASU effective January 1, 2011, with no material impact on our consolidated financial statements.

In June 2011, the FASB issued guidance on the presentation of comprehensive income. The new guidance eliminates the current option to report other comprehensive income and its components in the statement of changes in equity. Instead, an entity will be required to present either a continuous statement of net income and other comprehensive income or in two separate but consecutive statements. The new guidance is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2011 and will have presentation changes only.

In July 2011, the FASB issued guidance on the presentation of net patient service revenue. The new guidance requires a change in presentation of the statement of operations by reclassifying the provision for bad debts associated with patient service revenue from an operating expense to a deduction from patient service revenue (net of contractual allowances and discounts). Additionally, enhanced disclosure about policies for recognizing revenue and assessing bad debts are required. Disclosures of patient service revenue (net of contractual allowances and discounts) as well as qualitative and quantitative information about changes in the allowance for doubtful accounts will be required. The new guidance is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2011. We are in the final stages of analyzing this presentation of net patient service revenue.

In September 2011, the FASB issued guidance on intangibles including goodwill and other intangibles. The new guidance will allow an entity to first assess qualitative factors to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. The new guidance is effective for fiscal years beginning after December 15, 2011 and is expected to have no material impact on our consolidated financial statements.

C. ACQUISITION

In December 2010, we acquired the FAMILION family of genetic tests from PGxHealth, then a subsidiary of Clinical Data, Inc. with a sales price of $18.8 million. We secured $6.0 million of financing from Third Security Senior Staff 2008 LLC, Third Security Staff 2010 LLC, and Third Security Incentive 2010 LLC (the "Third Security Investors", affiliates of Third Security, LLC, a leading life sciences investment firm, to fund the cash portion of our acquisition. This strategic acquisition provided us with proprietary genetic commercial tests that have an established revenue base, proprietary biomarker assays, an additional CLIA-certified laboratory operation and established test reimbursement and coverage policies that offer access to testing. The acquired assets and liabilities assumed are reported as a component of our laboratory services segment.

Under the terms of the financing with the Third Security Investors, we issued an aggregate of 2,586,205 shares of the Company’s Series A Preferred Stock to the Third Security Investors. Additionally we issued to the Third Security Investors, Series A Warrants to purchase an aggregate of up to 1,293,102 shares of Series A Preferred Stock at an exercise price of $2.32 per share. The shares of Series A Preferred Stock issuable pursuant to the purchase agreement and upon exercise of the Series A Warrants are convertible into shares of our common stock at a conversion price of $0.58 per share, for an aggregate of 15,517,228 million shares of common stock. Upon full exercise of the Series A Warrants, we will receive approximately $3.0 million. These securities were issued for an aggregate purchase price of $6.0 million.

We entered into two notes payable with PGxHealth as a part of the acquisition. The first note is a three year secured promissory note in the amount of $8.6 million with interest accruing at 10%. The second note is a one year secured promissory note for facility improvements of $1.0 million with interest payable at 6.5%. See further information in Note G to the financial statements. Certain liabilities were assumed and various contingent liabilities recorded. The contingent liabilities include payments owed upon the collection of certain accounts receivable, retention bonuses for certain employees and royalties due to vendors based on milestone considerations.

The following table summarizes the consideration for the acquired assets and liabilities assumed at the acquisition date.

Consideration	Dollars in Thousands
Cash	$6,000
Notes payable	9,628
Assumed liabilities	452
Contingent liabilities	2,736

Fair value of consideration transferred	$18,816

Acquisition related costs included in selling, general and administrative expenses in our Statement of Operations for the year ended December 31, 2010 were $0.8 million. We incurred $0.2 million in acquisition related costs to issue Series A Preferred Stock which were recorded against the proceeds received upon the issuance of such Series A Preferred Stock.

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Recognized Amounts of Identifiable Assets Acquired and Liabilities Assumed	Dollars in Thousands
Working capital, net	$3,222
Property and Equipment	639
Identifiable intangible assets	8,680
Total identifiable net assets	12,541
Goodwill	6,275
Total purchase price	18,816

The fair value of the financial assets acquired includes accounts receivable with a fair value of $3.1 million. The gross amount due is $7.0 million, of which $3.9 million is expected to be uncollectible.
The goodwill arising from the acquisition primarily relates to synergies of the combined companies. The goodwill has been assigned to our Laboratory Services segment and is expected to be deductible for tax purposes.

The intangible assets were each valued separately using valuation approaches most appropriate for each specific asset.

Intangibles—acquired technology	Income Approach - Multi-period Excess Earnings Method
Intangibles—third party payor relationships	Cost Approach - Replacement Cost Method
Intangibles—assay royalties	Income Approach - Multi-period Excess Earnings Method
Intangibles—tradenames and trademarks	Income Approach - Relief from Royalty Method

Income Approach
The income approach is based upon the economic principle of anticipation. In this approach, the value of the subject intangible asset is the present value of the expected economic income to be earned from that intangible asset. This expectation is then converted into a present value through the selection of an investor's required rate of return given the risk and/or uncertainty associated with the subject intangible asset. In valuing an intangible asset using the income approach, the following elements should be considered: (i) remaining useful life, (ii) legal rights, (iii) position of the intangible asset in its respective life cycle, (iv) appropriate capital charges, (v) allocations of income, and (vi) whether any tax amortization benefit should be included in the analysis.

Cost Approach
The cost approach to intangible asset analysis is based upon the economic principles of substitution and price equilibrium. These basic economic principles assert that an investor pay no more for an investment than the cost to obtain an investment of equal utility. Within the cost approach there are several related analytical methods. Two of the most common and widely accepted include the reproduction cost and replacement cost methods. All cost based approaches typically involve a comprehensive analysis of the relevant cost components, which typically include: (i) materials, (ii) labor, (iii) overhead, (iv) intangible asset developer's profit, and (v) an adequate return on the asset developer's capital.

Reproduction cost contemplates the construction of an exact replica of the subject intangible asset. Before appropriate adjustments are made for the purposes of deriving an indication of value, reproduction cost does not consider either the market demand for or the market acceptance of the subject intangible. Therefore, before the requisite adjustments, the reproduction cost estimate does not answer the question of whether anyone would be interested in an exact replica

of the subject interest.

Unlike the reproduction cost method, the replacement cost method does consider market demand and market acceptance for the subject intangible. In other words, if there are elements or components of the subject intangible that generate little or no demand, they are not included in the subject intangible.

Excess Earnings Method
The Excess Earnings Method, a form of the Income Approach, reflects the present value of the projected cash flows that are expected to be generated by the intangible asset, less charges representing the contribution of other assets to those cash flows. As

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part of our analysis, we determined individual rates of return applicable to each acquired asset and estimate the effective “capital charge” to be applied to the earnings of the identified intangibles.

Relief-from-Royalty Method
The Relief-from-Royalty method, a form of the Income Approach, estimates the cost of licensing the acquired intangible asset from an independent third party using a royalty rate. Since the company owns the intangible asset, it is relieved from making royalty payments. The resulting cash flow savings attributed to the owned intangible asset are estimated over the intangible asset's remaining useful life and discounted to present value.
The fair value of the Series A Preferred Stock and related securities issued as a part of the consideration paid was determined on the basis of the closing market price of our common stock on the acquisition date, December 29, 2010. During 2011, we recorded a net purchase price adjustment of $0.2 million, increasing the amount of goodwill recorded for the purchase transaction, related to the adjustment in valuation of certain working capital accounts acquired.
The following table sets forth the pro-forma revenue and earnings of the combined entity if the acquisition had occurred as of the beginning of our prior fiscal year. No revenue or net income was included in our actual results for the year ended December 31, 2010 or 2009. These pro-forma amounts do not purport to be indicative of the actual results that would have been obtained had the acquisition occurred at that time.

	Dollars in Thousands Year Ended December 31,	
	2010	2009
Revenue—Supplemental pro-forma results	$33,733	$35,112
Net loss—Supplemental pro-forma results	(7,716)	(13,071)

D. RESTRUCTURING CHARGES
In the third quarter of 2010 we made a decision to consolidate our research and development activities in Omaha, Nebraska. We substantially completed the transition at December 31, 2010. We have recognized expenses for restructuring, including but not limited to, severance, facility costs and costs to move equipment from Gaithersburg, Maryland to Omaha, Nebraska. These restructuring charges are attributable to our Clinical Laboratories and Diagnostic Tools segments.
In the fourth quarter of 2010 we had a reduction in workforce of five employees with severance payments of less than $0.1 million which was attributable to our Diagnostic Tools segment.
Restructuring charges include:

	Dollars in Thousands Costs Incurred in the year ended December 31, 2011	Cumulative Costs Incurred at December 31, 2011	Total Expected Costs
Severance and related costs	$—	$53	$53
Facility closure costs	28	74	74
Other	13	52	52
Restructuring charges	$41	$179	$179

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E. INVENTORIES

Inventories (net of allowance for obsolescence) consisted of the following:

	Dollars in Thousands	
	December 31, 2011	December 31, 2010
Finished goods	$2,608	$2,119
Raw materials and work in process	1,485	1,531
Demonstration inventory	277	212
	$4,370	$3,862
Less allowance for obsolescence	(511)	(518)
Total	$3,859	$3,344

F. INTANGIBLES AND OTHER ASSETS

Long-lived intangible assets and other assets consisted of the following:

	Dollars in Thousands					
	December 31, 2011			December 31, 2010		
	Cost	Accumulated Amortization	Net Book Value	Cost	Accumulated Amortization	Net Book Value
Intangibles—acquired technology	$6,535	$911	$5,624	$6,535	$—	$6,535
Intangibles—assay royalties	1,434	205	1,229	1,434	—	1,434
Intangibles—third party payor relationships	367	—	367	367	—	367
Intangibles—tradenames and trademarks	344	49	295	344	—	344
Patents	703	267	436	511	245	266
Intellectual property	20	5	15	290	274	16
	$9,403	$1,437	$7,966	$9,481	$519	$8,962

	Estimated Useful Life
Intellectual property	10 years
Patents	7 years
Intangibles—acquired technology	7 – 8 years
Intangibles—third party payor relationships	Indefinite
Intangibles—assay royalties	7 years
Intangibles—tradenames and trademarks	7 years

Other assets include U.S. security deposits and deferred tax assets, net of applicable valuation allowances.

Amortization expense for intangible assets was $1.3 million during the year ended December 31, 2011 and less than $0.1 million during each of the years ended December 31, 2010 and 2009. Amortization expense for intangible assets is expected to be $1.2 million in each of the years 2012 through 2017.

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G. DEBT

	Dollars in Thousands Year Ended December 31,	
	2011	2010
PGxHealth note payable (the "First Note") [1]	$8,640	$8,640
PGxHealth note payable (the "Second Note") [2]	82	989
Third Security Convertible Promissory Notes [3]	3,000	—
Total debt, including short term debt	11,722	9,629
Short term debt	(3,082)	(989)
Current maturities of long term debt	(3,703)	—
Long-term debt, net of current maturities	$4,937	$8,640

(1) The First Note is a three year senior secured promissory note to PGxHealth, LLC entered into on December 29, 2010 in conjunction with our acquisition of the FAMILION family of genetic tests from PGxHealth. Interest is payable at 10% per year with quarterly interest payments through March 29, 2012. Thereafter, quarterly installments will include both principal and interest through December 30, 2013.

(2) The Second Note is a one year senior secured promissory note to PGxHealth, LLC entered into on December 31, 2010 for facility improvements made to the CLIA certified laboratory in New Haven, Connecticut. Interest is payable at 6.5% per year with the principal and interest payable in twelve monthly installments with the final payment made on January 3, 2012.

The entire unpaid balance of both the First Note and the Second Note will become immediately due and payable if: (i) we fail to make timely payments under the Notes; (ii) we make an assignment for the benefit of creditors; (iii) we file for bankruptcy; or (iv) upon any event of default under the Security Agreement. Additionally, under the terms of the First Note, if we consummate an equity financing that involves the receipt by us of net proceeds of not less than $6,000,000, then we shall, upon the consummation of such equity financing, pay to PGxHealth the lesser of: (i) 25% of the gross proceeds received from such financing; and (ii) the then-outstanding balance under the First Note. Under the terms of the Second Note, in the event of a sale of all or substantially all of the assets of the Company, we shall pay PGxHealth the lesser of: (i) 100% of the proceeds, less certain fees, received pursuant to such sale; and (ii) the then-outstanding balance under the Second Note.

The notes are secured by the assets of Transgenomic.

(3) The Third Security Promissory Notes are convertible promissory notes to Third Security Senior Staff 2008 LLC, Third Security Staff 2010 LLC and Third Security Incentive 2010 LLC entered into on December 30, 2011 with a maturity date of March 31, 2012. Interest is payable at 16% per year. The Third Security Promissory Notes automatically converts into the same class(es) or series and at the same price as the equity securities of the Company sold upon the first sale or issuance of its equity securities, after December 30, 2011, in the aggregate amount of at least $3,000,000, and provides that it shall be due and payable if it has not been converted prior to March 31, 2012. In connection with a private placement conducted by the Company in February 2012, the Third Security Promissory Notes converted into equity securities of the Company on the same terms as issued to investors in the private placement. See Note R to the consolidated financial statements.

The aggregate minimum principal maturities of the debt for each of the fiscal years following December 31, 2011 are as follows:

2012	$3,703
2013	4,937
	$8,640

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H. CAPITAL LEASES

The following is an analysis of the property acquired under capital leases.

	Dollars in Thousands	
Classes of Property	Asset Balances at December 31, 2011	December 31, 2010
Equipment	$1,052	$394
Less: Accumulated amortization	(164)	(13)
Total	$888	$381

The following is a schedule by years of future minimum lease payments under capital leases together with the present value of the net minimum lease payments as of December 31, 2011.

Year ending December 31:	Dollars in Thousands
2012	$ 378
2013	312
2014	97
2015	—
Total minimum lease payments	$ 787
Less: Amount representing interest	(99)
Present value of net minimum lease payments	$ 688

Included in depreciation for the year ended December 31, 2011 , 2010 and 2009 was $0.2 million, less than $0.1 million and $0.0 million, respectively, related to equipment acquired under capital leases.

I. COMMITMENTS AND CONTINGENCIES

We are subject to a number of claims of various amounts, which arise out of the normal course of business. In the opinion of management, the disposition of pending claims will not have a material adverse effect on our financial position, results of operations or cash flows.

We lease certain equipment, vehicles and operating facilities under non-cancellable operating leases that expire on various dates through 2022. The future minimum lease payments required under these leases are approximately $1.1 million in 2012, $1.0 million in 2013, $1.0 million in 2014, $0.9 million in 2015 and $0.9 million in 2016. Rent expense for each of the twelve months ended December 31, 2011, 2010 and 2009 was $0.9 million, $0.8 million and $0.8 million, respectively.

At December 31, 2011, firm commitments to vendors totaled $1.3 million.

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J. INCOME TAXES

The Company's provision for income taxes for the years ended December 31, 2011, 2010 and 2009 relates to income taxes in states, foreign countries and other local jurisdictions and differs from the amounts determined by applying the statutory Federal income tax rate to loss before income taxes for the following reasons:

	Dollars in Thousands		
	2011	2010	2009
Benefit at federal rate	$(3,311)	$(1,015)	$(639)
Increase (decrease) resulting from:			
State income taxes—net of federal benefit	2	20	(10)
Foreign subsidiary tax rate difference	(94)	(27)	(50)
Tax contingency	28	45	48
Net operating loss expiration	988	—	1,258
Earnings repatriation	—	1,479	—
Miscellaneous permanent differences	332	60	93
Other—net	(53)	86	(33)
Valuation allowance	2,153	(498)	(625)
Current income tax expense	$45	$150	$42

	Dollars in Thousands		
	2011	2010	2009
Federal:			
Current	$16	$4	$(58)
Deferred	—	—	—
Total Federal	$16	$3	$(58)
State:			
Current	$3	$29	$(16)
Deferred	—	—	—
Total State	$3	$29	$(16)
Foreign:			
Current	$159	$111	$(60)
Deferred	(133)	6	176
Total Foreign	$26	$117	$116
Total Tax Provision	$45	$150	$42

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The Company's deferred income tax asset from continuing and discontinued operations at December 31, 2011 and 2010 is comprised of the following temporary differences:

	Dollars in Thousands	
	2011	2010
Deferred Tax Asset:		
Net operating loss carryforward	$38,154	$38,201
Unrealized gain	2,062	—
Research and development credit carryforwards	1,232	1,232
Deferred net sales	190	151
Inventory	184	188
Other	552	473
	42,374	40,245
Less valuation allowance	(42,294)	(40,141)
Deferred Tax Asset	$80	$104
Deferred Tax Liability:		
Uninstalled instruments	$2	$159
Deferred Tax Liability	$2	$159
Net Deferred Asset (Liability)	$78	$(55)

At December 31, 2011, we had total unused federal tax net operating loss carryforwards from continuing and discontinued operations of $104.4 million of which $1.9 million expires in 2012, $1.8 million expires in 2018, $8.2 million expires in 2019, $9.7 million expires in 2020, $8.2 million expires in 2021, $16.9 million expires in 2022, $16.2 million expires in 2023, $17.4 million expires in 2024, $8.2 million expires in 2025, $6.8 million expires in 2026, $3.2 million expires in 2027, $1.3 million expires in 2028, $2.1 million expires in 2029, and $2.5 million expires in 2031. Of these federal net operating loss carryforwards, $5.5 million were obtained in the acquisition of Annovis, Inc. and may be subject to certain restrictions. Remaining net operating loss carryforwards could be subject to limitations under section 382 of the Internal Revenue Code. At December 31, 2011, we had unused state tax net operating loss carryforwards from continuing and discontinued operations of approximately $46.0 million that expire at various times beginning in 2012. At December 31, 2011, we had unused research and development credit carryforwards from continuing and discontinued operations of $1.2 million that expire at various times between 2012 and 2024. A net deferred tax liability was recorded during 2011 related to the UK income taxes for less than $0.1 million. A valuation allowance has been provided for the remaining deferred tax assets, due to the cumulative losses in recent years and an inability to utilize any additional losses as carrybacks. We will continue to assess the recoverability of deferred tax assets and the related valuation allowance. To the extent we begin to generate income in future years and it is determined that such valuation allowance is no longer required, the tax benefit of the remaining deferred tax assets will be recognized at such time.

We had no material unrecognized tax benefits, interest, or penalties during fiscal 2011 or 2010, and we do not anticipate any such items during the next twelve months. Our policy is to record interest and penalties directly related to income taxes as income tax expense in the Consolidated Statements of Operations. We file income tax returns in the U.S. federal jurisdiction, various U.S. state jurisdictions and various foreign jurisdictions. We have statutes of limitation open for Federal income tax returns related to tax years 2008, 2009, and 2010. We have state income tax returns subject to examination primarily for tax years 2007 through 2010. Open tax years related to foreign

jurisdictions remain subject to examination. Our primary foreign jurisdiction is the United Kingdom which has open tax years for 2007 through 2010.

During the years ended December 31, 2011 and 2010, there were no material changes to the liability for uncertain tax positions. The liability for uncertain tax positions relates to potential uncertain tax positions in foreign jurisdictions.

K. EMPLOYEE BENEFIT PLAN

We maintain an employee 401(k) retirement savings plan that allows for voluntary contributions into designated investment funds by eligible employees. Prior to October 1, 2010 we matched the employee's contributions at the rate of 50% on

the first 6% of contributions. Effective October 1, 2010, Transgenomic discontinued matching employee 401(k) contributions. We may, at the discretion of our Board of Directors, make additional contributions on behalf of the Plan's participants. Contributions to the 401(k) plan were $0.0 million, $0.1 million and less than $0.1 million for the years ended December 31, 2011, 2010 and 2009, respectively.

L. STOCKHOLDERS' EQUITY

Preferred Stock.

The Company's Board of Directors is authorized to issue up to 15,000,000 shares of preferred stock in one or more series, from time to time, with such designations, powers, preferences and rights and such qualifications, limitations and restrictions as may be provided in a resolution or resolutions adopted by the Board of Directors. The authority of the Board of Directors includes, but is not limited to, the determination or fixing of the following with respect to shares of such class or any series thereof: (i) the number of shares; (ii) the dividend rate, whether dividends shall be cumulative and, if so, from which date; (iii) whether shares are to be redeemable and, if so, the terms and amount of any sinking fund providing for the purchase or redemption of such shares; (iv) whether shares shall be convertible and, if so, the terms and provisions thereof; (v) what restrictions are to apply, if any, on the issue or reissue of any additional preferred stock; and (vi) whether shares have voting rights. The preferred stock may be issued with a preference over the common stock as to the payment of dividends. The Company has no current plans to issue any additional preferred stock. Classes of stock such as the preferred stock may be used, in certain circumstances, to create voting impediments on extraordinary corporate transactions or to frustrate persons seeking to effect a merger or otherwise to gain control of the Company. For the foregoing reasons, any additional preferred stock issued by the Company could have an adverse effect on the rights of the holders of the common stock.

On December 29, 2010, we entered into a transaction with the Third Security Investors, pursuant to the terms of Series A Convertible Preferred Stock Purchase Agreement ("Series A Purchase Agreement"), in which we: (i) sold an aggregate of 2,586,205 shares of Series A Preferred Stock at a price of $2.32 per share; and (ii) issued Series A Warrants to purchase up to an aggregate of 1,293,102 shares of Series A Preferred having an exercise price of $2.32 per share (the sale of Series A Preferred Stock and issuance of the Series A Warrants hereafter referred to as the "Financing"). The Series A Warrants may be exercised at any time from December 29, 2010 until December 28, 2015 and contains a "cashless exercise" feature. The gross proceeds from the Financing were $6.0 million. The $0.2 million of costs incurred to complete the Financing were recorded as a reduction in the value of the Series A Preferred Stock. We used the net proceeds from the financing to acquire the FAMILION family of genetic tests from PGxHealth, a subsidiary of Clinical Data, Inc. Until the November 2011modifications, the Series A Preferred Stock met the definition of mandatorily redeemable stock as it is preferred capital stock that is redeemable at the option of the holder through December 2015 and was reported outside of equity. The Series A Preferred Stock is accreted to its redemption value of $6.0 million. Until the November 2011 modifications, the Series A Warrants did not qualify to be treated as equity and, accordingly, was recorded as a liability. A preferred stock anti-dilution feature is embedded within the Series A Preferred Stock that meets the definition of a derivative.

In connection with the Financing, we filed a Certificate of Designation of Series A Convertible Preferred Stock (the "Certificate of Designation") with the Secretary of State of the State of Delaware, designating 3,879,307 shares of our preferred stock as Series A Preferred Stock. The Series A Preferred Stock, including the Series A Preferred Stock issuable upon exercise of the Series A Warrants, is convertible into shares of our common stock at a rate of 4-for-1, which conversion rate is subject to further adjustment as set forth in the Certificate of Designation. Certain rights of the holders of the Series A Preferred Stock are senior to the rights of the holders of common stock. The Series A Preferred Stock has a liquidation preference equal to its original price per share, plus any accrued and unpaid dividends thereon. The holders of the Series A Preferred Stock are entitled to receive quarterly dividends, which

accrue at the rate of 10.0% of the original price per share per annum, whether or not declared, shall compound annually and shall be cumulative. In any calendar quarter, we are required to pay from funds legally available a cash dividend in the amount of 50% of the distributable cash flow as defined in the Series A Purchase Agreement or the aggregate amount of dividends accrued on the Series A Preferred Stock. During the year ended December 31, 2011, we recorded $0.6 million in accrued dividends.

Generally, the holders of the Series A Preferred Stock are entitled to vote together with the holders of common stock, as a single group, on an as-converted basis. However, the Certificate of Designation provides that we shall not perform some activities, subject to certain exceptions, without the affirmative vote of a majority of the holders of the outstanding shares of Series A Preferred Stock. The holders of the Series A Preferred Stock also are entitled to elect or appoint, as a single group, two (2) of the five (5) directors of the Company.

In connection with the Financing, we also entered into a registration rights agreement with the Third Security Investors (the "Registration Rights Agreement"). Pursuant to the terms of the Registration Rights Agreement, the Company has granted the Third Security Investors certain demand, "piggyback" and S-3 registration rights covering the resale of the shares of common stock underlying the Series A Preferred Stock issued pursuant to the Series A Purchase Agreement and issuable upon exercise of the Series A Warrants and all shares of common stock issuable upon any dividend or other distribution with respect thereto.

In November 2011, we entered into a transaction with the Third Security Investors, pursuant to an Agreement Regarding Preferred Stock (the "Amendment Agreement"), in which the Third Security Investors agreed to (i) waive their rights to enforce the anti-dilution and redemption features of the Series A Preferred Stock and (ii) at the next annual shareholder meeting, vote to amend the Certificate of Designation to remove the anti-dilution and redemption features of the Series A Preferred Stock. In exchange, the Company issued shares of common stock to the Third Security Investors having an aggregate market value of $0.3 million.

As a result of the Amendment Agreement, the value of the Series A Preferred Stock and Series A Warrants, including the Series A Preferred Stock conversion feature and Series A Warrant liability, were reclassified into shareholders equity as of the date of the Amendment Agreement.

Common Stock.

The Company's Board of Directors is authorized to issue up to 100,000,000 shares of common stock, from time to time, as provided in a resolution or resolutions adopted by the Board of Directors.

Common Stock Warrants.

No common stock warrants were issued during the year ended December 31, 2011. Laurus Master Fund, Ltd. exercised its warrants during 2011 in a cashless exercise for 60,150 shares of common stock. Warrants to purchase 5,172,408 shares of common stock was outstanding at December 31, 2011.

Warrant Holder	Issue Year	Expiration	Underlying Shares	Exercise Price
Affiliates of Third Security, LLC (1)	2010	December 2015	5,172,408	$0.58

(1) Warrants issued in connection with the Financing. The number of shares shown reflects the post-conversion shares.

M. EQUITY INCENTIVE PLAN

The Company's 2006 Equity Incentive Plan (the "Plan") allows the Company to make awards of various types of equity-based compensation, including stock options, dividend equivalent rights ("DERs"), stock appreciation rights ("SARs"), restricted stock, restricted stock units, performance units, performance shares and other awards, to employees and directors of the Company. The Company may issue 10,000,000 shares under the Plan; provided, that no more than 5,000,000 of such shares may be used for grants of restricted stock, restricted stock units, performance units, performance shares and other awards. The Plan was adopted in 2006 as a modification of the Company's 1997 Stock Option Plan (the "Prior Plan"). In addition to providing for additional types of equity-based awards, the Plan increased the total number of shares of common stock that the Company may issue from 7,000,000 under the Prior Plan to 10,000,000 shares under the Plan; provided, that no more than 5,000,000 of such shares may be used for grants of restricted stock, restricted stock units, performance units, performance shares and other awards.

The Plan is administered by the Compensation Committee of the Board of Directors (the "Committee") which has the authority to set the number, exercise price, term and vesting provisions of the awards granted under the Plan, subject to the terms thereof. Either incentive or non-qualified stock options may be granted to employees of the Company, but only non-qualified stock options may be granted to non-employee directors and advisors. However, in either case, the Plan requires that stock options must be granted at exercise prices not less than the fair market value of the common stock on the date of the grant. Options issued under the plan vest over periods as determined by the Compensation Committee and expire 10 years after the date the option was granted. To date, the only awards made under the Plan

(and the Prior Plan) have been non-incentive stock options.

For the year ended December 31, 2011, we recorded compensation expense of $1.0 million within selling, general and administrative expense as a result of the vesting of options exercisable for the purchase of 3.0 million options. For the year ended December 31, 2010, we recorded compensation expense recovery of less than $0.1 million within selling, general and administrative

expense. Two executive officers departed during the second quarter of 2010. All stock options that were unvested were forfeited at the time of their departure as their requisite services periods were not completed. The vesting of options exercisable for the purchase of 1.3 million shares was offset by the expense recovery for stock options that were forfeited due to the requisite service not being rendered. For the year ended December 31, 2009, we recorded compensation expense of $0.2 million within selling, general and administrative expense as a result of the vesting of options exercisable for the purchase of 1.7 million shares. As of December 31, 2011, there was $1.0 million of unrecognized compensation expense related to unvested stock options, which is expected to be recognized over a weighted average period of nearly three years.

The fair value of the options granted during 2011 was estimated on their respective grant dates using the Black-Scholes option-pricing model. The Black-Scholes model was used with the following assumptions: risk-free interest rates of 0.92% to 2.16%, based on the U.S. Treasury yield in effect at the time of grant; dividend yields of zero percent; expected lives of three to five years, based on historical exercise activity; and volatility of 105% to 107% for grants made during the year ended December 31, 2011 based on the historical volatility of our stock over a time that is consistent with the expected life of the option. A small group of senior executives hold the majority of the stock options and are expected to hold the options until they are vested. Forfeitures of 1.1% to 3.6% have been assumed in the calculation.

The fair value of the options granted during 2010 was estimated on their respective grant dates using the Black-Scholes option-pricing model. The Black-Scholes model was used with the following assumptions: risk-free interest rates of 1.17% to 1.98%, based on the U.S. Treasury yield in effect at the time of grant; dividend yields of zero percent; expected lives of five years, based on historical exercise activity; and volatility of 103% to 105% for grants made during the year ended December 31, 2010 based on the historical volatility of our stock over a time that is consistent with the expected life of the option. A small group of senior executives hold the majority of the stock options and are expected to hold the options until they are vested. Forfeitures of 2.2% to 2.5% have been assumed in the calculation.

The fair value of the options granted during 2009 was estimated on their respective grant dates using the Black-Scholes option pricing model. The Black-Scholes model was used with the following assumptions: risk-free interest rates of 2.12% to 3.99%, based on the U.S. Treasury yield in effect at the time of grant; dividend yields of zero percent; expected lives of 5 to 10 years, based on historical exercise activity; and volatility of 106.08% to 80.03% for grants made during the year ended December 31, 2009 based on the historical volatility of our stock over a time that is consistent with the expected life of the option. A small group of senior executives hold the majority of the stock options and are expected to hold the options until they are vested therefore minimal forfeitures were assumed in 2009.

The following table summarizes activity under the Plan (and the Prior Plan) during the year ended December 31, 2011:

	Number of Options	Weighted Average Exercise Price
Balance at January 1, 2011:	2,565,001	$2.08
Granted	2,440,500	1.17
Exercised	(30,000)	(0.76)
Forfeited	(353,501)	(1.64)
Expired	(450,000)	(6.69)
Balance at December 31, 2011:	4,172,000	$1.10
Exercisable at December 31, 2011	2,131,045	$1.05

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The following table summarizes activity under the Plan (and the Prior Plan) during the year ended December 31, 2010:

	Number of Options	Weighted Average Exercise Price
Balance at January 1, 2010:	3,331,731	$2.39
Granted	125,000	0.50
Exercised	(100,000)	(0.42)
Forfeited	(593,499)	(0.73)
Expired	(198,231)	(11.07)
Balance at December 31, 2010:	2,565,001	$2.08
Exercisable at December 31, 2010	2,358,334	$2.22

The following table summarizes activity under the Plan (and the Prior Plan) during the year ended December 31, 2009:

	Number of Options	Weighted Average Exercise Price
Balance at January 1, 2009:	3,531,064	$2.54
Granted	70,000	0.42
Exercised	—	—
Forfeited	(72,833)	(1.39)
Expired	(196,500)	(4.85)
Balance at December 31, 2009:	3,331,731	$2.39
Exercisable at December 31, 2009	2,518,671	$2.96

The following table summarizes the stock options that were issued during the year ended December 31, 2011:

	Number of Options	Exercise Price
March 2, 2011	130,000	$0.74
May 18, 2011	2,205,500	$1.19
December 2, 2011	105,000	$1.28
	2,440,500	

The weighted average grant date fair value per share of options granted during the years ended December 31, 2011, 2010 and 2009 was $0.83, $0.38 and $0.33 respectively.

The following summarizes all stock options outstanding at December 31, 2011:

Exercise Price Range	Number of Options Outstanding	Remaining Weighted-Average Contractual Life	Weighted–Average Exercise Price	Number of Options Exercisable
$ 0.00—$ 1.30	3,934,167	7.5 years	$1.03	1,893,212
$ 1.31—$ 2.60	223,333	1.6 years	$1.89	223,333
$ 5.21—$ 6.50	7,000	.3 years	$6.16	7,000
$ 9.11—$10.00	7,500	.1 years	$9.63	7,500
	4,172,000			2,131,045

All stock options outstanding were issued to employees, officers or outside directors.

The aggregate intrinsic value of stock options exercisable was $0.7 million at December 31, 2011. The aggregate intrinsic value of stock options outstanding was $1.0 million at December 31, 2011. The aggregate intrinsic value of options exercised at

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December 31, 2011 and December 31, 2010 was less than $0.1 million in each year. No options were exercised in 2009.

N. FAIR VALUE

FASB guidance on fair value measurements, which defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements for our financial assets and liabilities, as well as for other assets and liabilities that are carried at fair value on a recurring basis in our consolidated financial statements. FASB guidance establishes a three-level fair value hierarchy based upon the assumptions (inputs) used to price assets or liabilities. The three levels of inputs used to measure fair value are as follows:

Level 1—Unadjusted quoted prices in active markets for identical assets or liabilities,

Level 2—Observable inputs other than those included in Level 1, such as quoted prices for similar assets and liabilities in active markets or quoted prices for identical assets or liabilities in inactive markets, and

Level 3—Unobservable inputs reflecting our own assumptions and best estimate of what inputs market participants would use in pricing the asset or liability.

Prior to November 2011, the preferred stock warrant liability and preferred stock conversion feature were recorded separately at fair value. We were required to record these instruments at fair value at each reporting date and changes were recorded as an adjustment to earnings. The gains or losses included in earnings are reported in other income (expense) in our Statement of Operations.

In November 2011, we entered into a transaction with the Third Security Investors, pursuant to an Agreement Regarding Preferred Stock (the “Amendment Agreement”), in which the investors agreed to (i) waive their rights to enforce the anti-dilution and redemption features of the Series A Preferred Stock and (ii) at the next annual shareholder meeting, vote to amend the Certificate of Designation to remove the anti-dilution and redemption features of the Series A Preferred Stock. In exchange, the Company issued shares of common stock to the investors having an aggregate market value of $0.3 million.

As a result of the Amendment Agreement, the value of the Series A Preferred Stock and Series A Warrants, including the Series A Preferred Stock conversion feature and Series A Warrant liability, were reclassified into shareholders equity as of the date of the Amendment Agreement.

The Series A Warrant liability and Series A Preferred Stock conversion feature are considered Level 3 financial instruments and were valued using the Black Scholes call option pricing formula, which approximates a binomial model for the preferred stock conversion feature. This method is among the most common and widely used valuation approaches for call options. The model relates an option's value to five variables: the current price of the underlying asset, the strike price of the option, the time to expiration or exercise of the option, a risk free interest rate, and the volatility of the underlying asset.

The following assumptions were used in the November 8, 2011 valuation of the Series A Preferred Stock conversion feature: the closing share price of our stock on November 8, 2011 discounted 15% due to the lack of marketability and liquidity, an exercise price of $0.39, expected term of 4.00 years, risk-free interest rate of 0.65% based on a linear interpolation of 3 year and 5 year U.S. Treasury rates and volatility of 50%.

The following assumptions were used in the November 8, 2011 valuation of the Series A Warrants: an exercise price of $2.32, expected term of 1.0 year, risk-free interest rate of 0.25% based on a 1 year U.S. Treasury and volatility of 50%.

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During the year ended December 31, 2011, the changes in the fair value of the liabilities measured using significant unobservable inputs (Level 3) were comprised of the following:

	Dollars in Thousands For the year ended December 31, 2011		
	Preferred Stock Conversion Feature	Preferred Stock Warrant Liability	Total
Beginning balance at January 1, 2011	$1,983	$2,351	$4,334
Total gains or losses:			
Recognized in earnings	5,317	449	5,766
Balance as of November 8, 2011	7,300	2,800	10,100
Reclassification to shareholders' equity due to Amendment Agreement	$(7,300)	$(2,800)	$(10,100)
Balance as of December 31, 2011	$—	$—	$—

During 2011, we recorded expense associated with the Series A Preferred Stock and Series A Warrants of $6.1 million, which is due to the change in fair value of the preferred stock conversion feature of $5.8 million and the issuance of $0.3 million in common stock to the Third Security Investors.

During the year ended December 31, 2010, the changes in the fair value of the liabilities measured using significant unobservable inputs (Level 3) were comprised of the following:

	Dollars in Thousands For the year ended December 31, 2010		
	Preferred Stock Conversion Feature	Preferred Stock Warrant Liability	Total
Beginning balance at January 1, 2010	$—	$—	$—
Issuance	1,983	2,351	4,334
Balance at December 31, 2010	$1,983	$2,351	$4,334

There were no purchases, sales, or settlements of Level 3 liabilities in the year ended December 31, 2011 and 2010, respectively. The unrealized gains or losses of Level 3 liabilities are included in earnings are reported in other income (expense) in our Statement of Operations.

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O. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

	In thousands except per share data			
	March 31	June 30	September 30	December 31
2011				
Net Sales	$7,480	$7,667	$8,253	$8,571
Gross Profit	4,154	4,555	4,445	5,283
Net Income (Loss)	(2,778)	(5,998)	(1,270)	264
Basic and diluted loss per common share	$(0.06)	$(0.13)	$(0.03)	$—
2010				
Net Sales	$5,442	$5,095	$4,419	$5,092
Gross Profit	2,884	2,487	2,017	2,376
Net Loss	(324)	(1,146)	(898)	(767)
Basic and diluted loss per common share	$(0.01)	$(0.02)	$(0.02)	$(0.01)

P. OPERATING SEGMENT AND GEOGRAPHIC INFORMATION

Our company’s chief operating decision-maker is the Chief Executive Officer, who regularly evaluates our performance based on net sales and gross profit. The preparation of this segment analysis requires management to make estimates and assumptions around expenses below the gross profit level. While we believe the segment information to be directionally correct, actual results could differ from the estimates and assumptions used in preparing this information.

We have three reportable operating segments, Clinical Laboratories, Pharmacogenomic Services and Diagnostic Tools. During the third quarter of 2011, we changed the manner in which we report segment results internally. Accordingly, segment results of the prior period have been reclassified to reflect these changes. Beginning with the third quarter of 2011 our company's chief operating decision-maker is now reviewing our business as having three segments. The change in segments was driven by our corporate strategy to advance personalized medicine through proprietary molecular technologies and world-class clinical and research services. These lines of business are complementary with the Pharmacogenomics Services driving innovation and leading to kit production in our Diagnostic Tools segment and new tests in our Clinical Laboratories.

The accounting policies of the segments are the same as the policies discussed in Footnote B – Summary of Significant Accounting Policies.

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Years Ended December 31, 2011, 2010 and 2009

Segment information for the years ended December 31, 2011, 2010 and 2009 is as follows:

	Dollars in Thousands			
	2011			
	Clinical Laboratories	Pharmacogenomic Services	Diagnostic Tools	Total
Net Sales	$16,038	$2,280	$13,653	$31,971
Gross Profit	9,478	1,050	7,909	18,437
Net Income (Loss) before Taxes	(11,016)	(354)	1,633	(9,737)
Income Tax Expense (Benefit)	—	—	45	45
Net Income (Loss)	$(11,016)	$(354)	$1,588	$(9,782)
Depreciation/Amortization	1,568	242	235	2,045
Restructure	29	—	12	41
Interest Income (Expense)	(959)	—	—	(959)
	December 31, 2011			
Total Assets	$22,032	$1,636	$9,894	$33,562
Goodwill	6,440	$—	$—	$6,440

	Dollars in Thousands			
	2010			
	Clinical Laboratories	Pharmacogenomic Services	Diagnostic Tools	Total
Net Sales	$3,606	$1,373	$15,069	$20,048
Gross Profit	1,481	(43)	8,326	9,764
Net Loss before Taxes	(1,829)	(696)	(459)	(2,984)
Income Tax Expense (Benefit)	—	—	150	150
Net Loss	$(1,829)	$(696)	$(609)	$(3,134)
Depreciation/Amortization	119	186	190	495
Restructure	65	—	73	138
Interest Income (Expense)	(1)	—	(3)	(4)
	December 31, 2010			
Total Assets	$22,945	$1,686	$7,396	$32,027
Goodwill	6,275	$—	$—	$6,275

	Dollars in Thousands			
	2009			
	Clinical Laboratories	Pharmacogenomic Services	Diagnostic Tools	Total
Net Sales	$3,541	$1,025	$17,457	$22,023
Gross Profit	1,523	205	9,877	11,605
Net Loss before Taxes	(1,763)	(510)	395	(1,878)
Income Tax Expense (Benefit)	—	—	42	42
Net Loss	$(1,763)	$(510)	$353	$(1,920)
Depreciation/Amortization	146	151	450	747
Restructure	—	—	—	—

Interest Income (Expense)	4	—	11	15
	December 31, 2009			
Total Assets	$6,796	$ 661	$8,547	$16,004

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Years Ended December 31, 2011, 2010 and 2009

Net sales for the year ended December 31, 2011, 2010 and 2009 by country were as follows:

	Dollars in Thousands Years ended December 31,		
	2011	2010	2009
United States	$22,626	$8,729	$8,777
Italy	3,152	3,294	3,683
United Kingdom	778	1,412	842
Germany	750	1,366	1,383
France	758	1,160	1,545
Netherlands	97	56	1,464
All Other Countries	3,810	4,031	4,329
Total	$31,971	$20,048	$22,023

No other country accounted for more than 5% of total net sales.

More than 95% of our long-lived assets are located within the United States. Substantially all of the remaining long-lived assets are located within Europe.

Q. RELATED PARTY AND SUBSEQUENT EVENTS

On December 29, 2010, the Company issued 2,586,205 shares of Series A Preferred Stock that were not registered under the Securities Act of 1933 (the “Securities Act”). The issuance of such Series A Preferred Stock was related to the financing for the Company's acquisition of assets from PGxHealth. Please refer to the Series A Convertible Preferred Stock Purchase Agreement with the Third Security Investors dated December 29, 2010.

On November 8, 2011, the Company entered into an Amendment Agreement with the Third Security Investors, which are the holders of all of the outstanding shares of the Company's Series A Preferred Stock. Pursuant to the Amendment Agreement, the Third Security Investors and the Company agreed to amend the Certificate of Designation to eliminate certain features of the Series A Preferred Stock relating to (i) an anti-dilution adjustment to the conversion rate upon which the Series A Preferred Stock is convertible into the Company's common stock and (ii) an optional redemption of the Series A Preferred Stock by the Third Security Investors (the “Certificate Amendment”); subject to the requisite stockholder approval of the Certificate Amendment at the Company's next annual meeting of its stockholders. Pursuant to the Amendment Agreement, the Third Security Investors agreed to vote the Series A Preferred Stock and their common stock in favor of the Certificate Amendment and agreed to waive their rights to the features of the Series A Preferred Stock being eliminated by the Certificate Amendment. In exchange for the Third Security Investors entering into the Amendment Agreement, the Company agreed to issue to the holders an aggregate of $0.3 million market value of common stock or 245,903 shares of common stock.

On December 30, 2011, the Company entered into a Convertible Promissory Note Purchase Agreement (the “Note Purchase Agreement”) with the Third Security Investors in the aggregate amount of $3.0 million. The Third Security Investors currently own all the outstanding shares of the Company's Series A Preferred Stock. Under the Note Purchase Agreement, the Company sold to each of the Third Security Investors a convertible note which matures on March 31, 2012. The Note Purchase Agreement and notes provide for conversion of any amount remaining due to the Third Security Investors under the notes into equity securities of the Company of the same class(es) or series and at the same price as the equity securities of the Company sold in the Company's first sale or issuance of its equity securities after December 30, 2011, in the aggregate amount of at least $3.0 million. The notes and the equity securities into which the notes are convertible have not been registered under the Securities Act and applicable state

securities laws, but have been offered and sold in the United States pursuant to applicable exemptions from registration requirements under the Securities Act and applicable state securities laws.

On February 2, 2012, the Company entered into a Securities Purchase Agreement with certain institutional and other accredited investors pursuant to which the Company: (i) sold to the investors an aggregate of 19,000,000 shares of the Company's common stock at a price per share of $1.00 for aggregate gross proceeds of approximately $19.0 million; and (ii) issued to the investors warrants to purchase up to an aggregate of 9,500,000 shares of common stock with an exercise price of $1.25 per share. The warrants may be exercised, in whole or in part, at any time from February 7, 2012 until February 7, 2017 and contain both cash and “cashless exercise” features. The warrants also impose penalties on the Company for failure to deliver the shares of

common stock issuable upon exercise. The Company currently intends to use the net proceeds from the offering for general corporate and working capital purposes, primarily to accelerate development of several of the company's key initiatives.

As part of the offering, in connection with the conversion of certain convertible promissory notes in the aggregate amount of $3.0 million issued by the Company on December 30, 2011 to Third Security Investors, the Third Security Investors collectively received 3,000,000 shares of common stock and warrants to purchase up to 1,500,000 shares of common stock upon the same terms as the investors.

The Registration Rights Agreement requires the Company to file an initial registration statement on Form S-1 with the SEC on or before March 23, 2012. If the initial registration statement is not filed with the SEC on or before March 23, 2012 the Company shall pay to each holder an amount in cash, as liquidated damages, equal to 1.5% of the aggregate purchase price paid by such holder and again on each 30 day anniversary that the deadline is not met. In no event shall the aggregate amount of liquidated damages payable to a holder exceed 10% of the purchase price.

The following pro-forma balance sheet does not contemplate the impact of the valuation of the preferred stock warrants.

The following table set forth a summary of the balance sheet as reported and pro-forma as if the private placement financing had occurred on December 31, 2011:

	Actual Dollars in Thousands December 31, 2011	Pro-Forma December 31, 2011
Total Assets	$33,562	$51,129
Total Liabilities	22,514	19,514
Total Stockholders' Equity	11,048	31,615
	$33,562	51,129

Effective June 30, 2010, we entered into a letter agreement with CFO Systems, LLC and Brett L. Frevert. Under the letter agreement CFO Systems will provide financial and consulting services to us at rates of $75 to $150 per hour depending on the level of expertise involved. The services will include providing Chief Financial Officer duties and other financial and accounting expertise on a time share basis. CFO Systems, LLC or the Company may terminate the agreement upon thirty days written notification. In connection with the letter agreement, Mr. Frevert agreed to serve as our Chief Financial Officer. We were charged $405,763 and $126, 459 for the services provided by CFO Systems, LLC during 2011 and 2010, respectively.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosures.

None.

Item 9A. Controls and Procedures.

(a) Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this Annual Report, management performed, with the participation of our Chief Executive Officer and Chief Financial Officer, an evaluation of the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to management including our Chief Executive Officer and our Chief Financial Officer, to allow timely decisions regarding required

disclosures. Based on the evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2011, the Company's disclosure controls and procedures were effective.

(b) Management’s Report on Internal Control Over Financial Reporting

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Our management is responsible for establishing and maintaining an adequate system of internal control over financial reporting. Our system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.
Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets;
- provide reasonable assurance that our transactions are recorded as necessary to permit preparation of our financial statements in accordance with accounting principles generally accepted in the United States of America, and that our receipts and expenditures are being made only in accordance with authorizations of our management and our directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Further, because of changes in conditions, effectiveness of internal controls over financial reporting may vary over time. Our system contains self-monitoring mechanisms, and actions are taken to correct deficiencies as they are identified.

Management has conducted, with the participation of our Chief Executive Officer and our Chief Financial Officer, an assessment, including testing of the effectiveness of our internal control over financial reporting as of December 31, 2011. Management’s assessment of internal control over financial reporting was conducted using the criteria in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). Based on that assessment, management has concluded that the Company’s internal control over financial reporting was effective as of December 31, 2011.
McGladrey & Pullen, LLP, an independent registered public accounting firm, has audited the Company's financial statements included in this report on Form 10-K and issued its report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2011, which is included herein.
(c) Changes in internal control over financial reporting
There have been no changes in internal control over financial reporting that occurred during the quarter ended December 31, 2011 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information.
None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance.

Our Board of Directors

Our Board of Directors (“Board”) consists of five directors. The Board of Directors 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 2013, 2014 and 2012, respectively. The holders of our Preferred Stock (the "Preferred Stockholders") are entitled, as a separate voting group, to elect two (2) of the five directors (“Preferred Stock Directors”). The common stockholders are entitled, as a separate voting group, to elect the three (3) remaining directors (“Common Stock Directors”). There is one Common Stock Director in each class of directors. 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 the Class I directors and Doit L. Koppler II is the current Preferred Stock Director in the Class II directors.

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Our Class III director, Rodney S. Markin, M.D., Ph.D, is nominated and standing for election at our upcoming 2012 Annual Meeting of Stockholders.

Certain biographical information regarding our directors, including their ages and 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 led the Board to conclude that each individual should serve as a director 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 I DIRECTORS				
Robert M. Patzig, Preferred Stock Director	43	Senior Managing Director and Chief Investment Officer, Third Security, LLC	2010	2013
Craig J. Tuttle, Common Stock Director	59	President and Chief Executive Officer of Transgenomic, Inc.	1997	2013
CLASS II DIRECTORS				
Doit L. Koppler II, Preferred Stock Director	48	Managing Director and Treasurer, Third Security, LLC	2010	2014
Antonius P Schuh, Ph.D, Common Stock Director	48	Chief Executive Officer of Sorrento Therapeutics, Inc.	2009	2014
CLASS III DIRECTORS				
Rodney S. Markin, M.D., Ph.D, Common Stock Director	55	Chairman of the Board, Transgenomic, President of University of Nebraska Medical Center Physicians	2007	2015

Robert M. Patzig. Mr. Patzig joined Third Security upon the company's inception in 1998. Mr. Patzig's responsibilities include identifying and researching investment opportunities for Third Security and its funds, securities valuation and portfolio management. Mr. Patzig is a Director of the Virginia Biotechnology Association, a non-profit industry advocacy group, and a member of the Virginia Tech English Department Distinguished Alumni. Mr. Patzig has served as Chairman of the Board of Intrexon Corporation and Cyntellect, Inc. and served as a member of the Board of Directors of Synchrony, Inc. Mr. Patzig 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 served as the Chief Executive Officer and Chief Compliance Officer of New River Advisors LLC from June of 2003 until August of 2007. Prior to the formation of Third Security, Mr. Patzig served as Director of Market Research and Analysis at GIV Holdings, Inc. and Director of Research Services at General Injectables & Vaccines, Inc. Mr. Patzig received a B.A. in Philosophy and English from Virginia Tech. The Board select Mr. Patzig as a director because of his substantial biotech industry experience as well as his securities and investment expertise.

Craig J. Tuttle. Mr. Tuttle has served as our President and Chief Executive Officer since 2006. From 2004 to 2005, Mr. Tuttle was President and Chief Operating Officer of Duke Scientific. From 1999 to 2003, Mr. Tuttle served as President and Chief Executive Officer of Applied Biotech, Inc. The Board selected Mr. Tuttle to serve as a director because he is the Company's Chief Executive Officer. He has expansive knowledge and experience in the biotech industry, as well as relationships with chief

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executives and other senior management at biotech companies.

Doit L. Koppler, II. Mr. Koppler joined Third Security 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 currently serves 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. 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 1992-2000. From 1987-1992, he was a Manager in the audit practice of Ernst & Young LLP. Mr. Koppler is a Certified Public 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.

Antonius P. Schuh, Ph.D. Dr. Schuh co-founded Sorrento Therapeutics, Inc. (NASDAQ: SRNE) in January 2006 and has served as its Chairman since such time and as its Chief Executive Officer since November 2008. From April 2006 to September 2008 Dr. Schuh served as CEO of AviaraDx, Inc. (now bioTheranostics, Inc., a bioMerieux Company). From March 2005 to April 2006 Dr. Schuh was CEO of Arcturus Bioscience, Inc. As of January 23, 2012, Dr. Schuh also serves as a director of TrovaGene, Inc. (PK: TROV), a molecular diagnostics company. In addition, Dr. Schuh was a director of Sequenom, Inc. (NASDAQ: SQNM) from May 2000 to February 2005. The Board selected Dr. Schuh to serve as a director because it believes he possesses valuable biotech experience and extensive executive management experience in the industry which brings a unique and valuable perspective to the Board.

Rodney S. Markin, M.D., Ph.D. Dr. Markin is Professor of Pathology and Microbiology and Surgery, Senior Associate Dean for Clinical Affairs, College of Medicine at the University of Nebraska Medical Center and Chairman and President of UNMC Physicians (the UNMC medical practice). Dr. Markin is also a director of Nebraska Surgical Solutions, Inc. The Board selected Dr. Markin to serve as a director because he has valuable executive experience in the healthcare business. Dr. Markin also has extensive experience serving on other boards. His ability to communicate and encourage discussion makes him an effective Chairman for the Board.

Our Executive Officers

The following provides certain biographical information regarding our executive officers, including their ages and dates that they first joined our Company; provided that information regarding Craig J. Tuttle, our President and Chief Executive Officer, is set forth in the section above entitled “Our Board of Directors.”

Chad Richards. Mr. Richards, age 42, joined the Company in October 2007 as Senior Vice President, Sales and Marketing and was promoted to Chief Commercial Officer in January 2011. Before joining the Company, Mr. Richards was the National Sales Director for Anatomic Pathology with Quest Diagnostics. During his career with Quest Diagnostics, Mr. Richards held a variety of sales management roles in both their physician and hospital business segments. Before joining Quest Diagnostics, Mr. Richards held different marketing and sales management roles with Roche Diagnostics Ventana Medical Systems Division, one of the world's leading developers and manufacturers of immunohistochemistry and in-situ hybridization instruments and reagent systems. Before embarking on a career in diagnostics, Mr. Richards served in the United States Marine Corps.

Brett Frevert. Mr. Frevert, age 49, was appointed as our Chief Financial Officer by the Board of Directors on June 28, 2010. Mr. Frevert's serves as Chief Financial Officer pursuant to the terms a letter agreement with CFO Systems, LLC

("CFO Systems") and Brett L. Frevert. Under the letter agreement CFO Systems provides financial and consulting services to us. Since 2004 Mr. Frevert has been Managing Director of CFO Systems, which he founded in 2004. During that time he has served as CFO of several Midwestern companies, including SEC registrants and private companies. Prior to founding CFO Systems, Mr. Frevert was CFO of a regional real estate firm and also served as Interim CFO of First Data Europe. Mr. Frevert began his career with Deloitte & Touche, serving primarily SEC clients in the food and insurance industries.

There is no family relationship between any of the directors or executive officers and any other director or executive officer of the Company.

Business Ethics Policy

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Our Board of Directors has adopted a code of ethical conduct that applies to our principal executive officer, principal financial officer and senior financial officers. This code of ethical conduct is embodied within our Business Ethics Policy, which applies to all persons associated with the Company, including our directors, officers, and employees (including our principal executive officer, principal financial officer, principal accounting officer and controller). The Business Ethics Policy is available in the investor relations section of our website at www.transgenomic.com. We will disclose amendments to, or waivers of, certain provisions of our Business Ethics Policy 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.

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Corporate Governance

Board Leadership Structure

Our Board has determined that having an independent director serve as the Chairman of the Board is in the best interests of our stockholders. Our Chairman of the Board is Rodney S. Markin, Ph.D. Our President and CEO, Mr. Tuttle, is the only member of our Board who is not an independent director. We believe that this leadership structure enhances the accountability of our President and CEO to the Board and strengthens the Board's independence from management. While both leaders are actively engaged on significant matters affecting the Company, such as long-term strategy, we believe splitting these leadership positions enables Mr. Tuttle to focus his efforts on running our business and managing the Company while permitting Dr. Markin to focus more on the governance of the Company, including oversight of our Board.

Director Attendance at Meetings.

Our Board conducts its business through meetings of the Board, both in person and telephonic, and actions taken by written consent in lieu of meetings. During the year ended December 31, 2011, the Board of Directors held six meetings and acted by written consent in lieu of a meeting three times. All directors attended at least 75% of the meetings of the Board of Directors and of the committees of the Board of Directors on which they served during 2011.

Our Board strongly encourages all directors to attend our annual meetings of stockholders unless it is not reasonably practicable for a director to do so. All of the directors serving as of May 18, 2011 attended our 2011 Annual Meeting of Stockholders.

Committees of our Board of Directors

Our Board has established and delegated certain responsibilities to its standing Audit Committee and a Compensation Committee. We do not have a standing nominating committee.

Audit Committee.

We have a separately designated Audit Committee established in accordance with Section 3(a)(58)(A) of 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 independent auditors 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 auditors and reviewing any transactions between the Company and related parties. Our independent auditors report directly and are accountable solely to the Audit Committee. The Audit Committee has the sole authority to hire and fire the independent auditors and is responsible for the oversight of the performance of their duties, including ensuring the independence of the independent auditors. The Audit Committee also approves in advance the retention of, and all fees to be paid to, the independent auditors. The rendering of any auditing services and all non-auditing services by the independent auditors is subject to the approval in advance of the Audit Committee.

The Audit Committee operates under a written charter which is available on our website at www.transgenomic.com. The Audit Committee is required to be composed of directors who are independent of the Company under the rules of the SEC and the NASDAQ listing standards.

The current members of the Audit Committee are directors Dr. Markin and Dr. Schuh each of whom has been determined by the Board of Directors to be independent under the rules adopted by the SEC and NASDAQ listing

standards. The Board of Directors has determined that Dr. Markin 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 four times during 2011.

Compensation Committee.

The Compensation Committee reviews and approves our compensation policy, changes in salary levels and bonus payments to our executive officers and other management and determines the timing and terms of equity awards under our equity incentive plans. The Compensation Committee operates under a written charter which is available on our website at www.transgenomic.com.

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The Compensation Committee currently consists of directors Dr. Schuh, Dr. Markin and Mr. Patzig each of whom has been determined by the Board of Directors to be independent under the NASDAQ listing standards. The Compensation Committee met four times during 2011.

Oversight of Risk Management.

Risk is inherent with every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including economic risks, financial risks, legal and regulatory risks, and others, such as the impact of competition. Management is responsible for the day-to-day management of the risks that we face, while the Board, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our Board is responsible for satisfying itself that the risk management processes designed and implemented by management are adequate and functioning as designed. Our Board assesses major risks facing the Company and options for their mitigation in order to promote its stockholders' interests in the long-term health and the overall success of the Company and its financial strength. A fundamental part of risk management is not only understanding the risks a company faces and what steps management is taking to manage those risks, but also understanding what level of risk is appropriate for the Company. The involvement of our full Board in the risk oversight process allows our Board to assess management's appetite for risk and also determine what constitutes an appropriate level of risk for the Company. Our Board regularly includes agenda items at its meetings relating to its risk oversight role and meets with various members of management on a range of topics, including corporate governance and regulatory obligations, operations and significant transactions, risk management, insurance, pending and threatened litigation and significant commercial disputes.

While our Board is ultimately responsible for risk oversight, various committees of the Board oversee risk management in their respective areas and regularly report on their activities to our entire Board. In particular, the Audit Committee has the primary responsibility for the oversight of financial risks facing the Company. The Audit Committee's charter provides that it will discuss our major financial risk exposures and the steps we have taken to monitor and control such exposures. The Board has also delegated primary responsibility of the oversight of all executive compensation and the Company's employee benefit programs to the Compensation Committee. The Compensation Committee strives to create incentives that encourage a level of risk-taking behavior consistent with the Company's business strategy.

We believe the division of risk management responsibilities described above is an effective approach for addressing the risks facing the Company and that our Board leadership structure provides appropriate checks and balances against undue risk taking.

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 2011, except that one Form 4 to report option grants made on May 18, 2011 was not filed timely by Mr. Tuttle, Mr. Richards and Mr. Frevert each.

Item 11. Executive Compensation.

COMPENSATION DISCUSSION AND ANALYSIS

Our compensation philosophy is designed to support our key objective of creating value for our stockholders by growing our revenues, growing our earnings, increasing our total market capitalization and growing our share price.

This Compensation Discussion and Analysis explains our compensation objectives, policies and practices with respect to Craig Tuttle, President and Chief Executive Officer; Brett Frevert, Chief Financial Officer, and Chad Richards,

Chief Commercial Officer, whom are collectively referred to as the "named executive officers" or, in this “Compensation Discussion and Analysis” section, our executives.

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Objectives of Our Executive Compensation Programs

Our compensation programs for our named executive officers are designed to achieve the following objectives:

- attract and retain high performing and experienced executives;
- motivate and reward executives whose knowledge, skills and performance are critical to our success;
- align the interests of our executives and stockholders by motivating executives to increase stockholder value and rewarding executives when stockholder value increases;
- foster a shared commitment among executives by coordinating their goals;
- motivate our executives to manage our business to meet our short and long-term objectives, and reward them for meeting these objectives.

Role of our Compensation Committee

We have a Compensation Committee that has the primary purpose of providing oversight of all executive compensation and the Company's employee benefit programs. The Compensation Committee's responsibilities include, but are not limited to, the direct responsibility for the following:

- Review and approve corporate goals and objectives relevant to CEO and other executive officers' compensation, evaluate performance in light of these goals and objectives, and determine and approve the compensation level for the CEO and other executive officers based on this evaluation.
- Make recommendations to the Board of Directors with respect to incentive-compensation plans and equity-based plans.
- Adoption of stock option and other long-term incentive plans and approval of individual grants and awards.
- Adoption of executive annual incentive plans and approval of total incentive payments and individual awards to the President, CEO and other executive officers.
- Adoption of benefit plans, including profit sharing and supplemental retirements plans.
- Adoption of executive perquisite programs.
- Annual evaluation and appraisal of President and CEO performance.
- Approval of all employment agreements for President, CEO and other executives.
- Annual review of non-employee Director compensation programs and recommendation of changes to the Board of Directors when appropriate.

Our Chief Executive Officer makes recommendations to our Compensation Committee regarding the compensation of all executive officers, excluding his own, but our Compensation Committee is ultimately responsible for approving this compensation.

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Role of Our CEO and Executive Management

Our CEO annually evaluates the performance of each executive and, based on that review, may recommend changes in the executive's compensation to the Compensation Committee. This review includes a performance appraisal that takes into consideration various factors, including, without limitation, the following:

- the ability of the executive to drive results for the Company;
- the executive's understanding of the Company's business and his/her organizational savvy;
- the ability of the executive to make complex decisions and his/her strategic abilities;
- the executive's ability to manage work process;
- the communication skills of the executive; and
- the executive's ability to manage diversity and ethics.

The CEO's review also includes a determination of each executive's leadership attributes along with other key accomplishments during the review period. Our Company is an evolving company, and executives' roles and scope of work, and the size and geographical diversity of the groups they manage are subject to change. As an executive's role changes, our CEO may recommend changes to the executive's compensation to the Compensation Committee.

The CEO's compensation recommendations may include changes in base salary and incentive bonus, additional equity grants or modifications to standard vesting schedules that are deemed to be in the best interest of the Company.

Peer Group Information and Benchmarking

In connection with compensation decisions in 2011, our Compensation Committee, with the assistance of the Chief Executive Officer and other Company employees, reviewed market compensation data paid by companies in the biopharmaceutical industry as reported by Top 5 Data Services, Inc. (the “2011 Competitive Analysis”). The 2011 Competitive Analysis contained data from 342 publicly traded companies within the biopharmaceutical industry covering the details of compensation for 1,249 top executives. Our Chief Executive Officer, in consultation with the Chairman of the Compensation Committee, reviewed all of the data contained in the 2011 Competitive Analysis and then selected companies with annual revenue of between $25 million and $149.9 million and between 100 and 500 employees to be used as peer group companies for purposes of benchmarking.

The Compensation Committee and management used the peer group compensation data selected from the 2011 Competitive Analysis primarily to ensure that the total direct compensation for our executives and senior management is within a reasonable range of comparative pay of our peer group companies. While this market data provides a useful starting point for compensation decisions, our Compensation Committee also takes into account factors such as level of individual responsibility, prior experience and performance in arriving at final compensation decisions.

Generally, neither management nor the Compensation Committee utilizes the services of independent compensation consultants in connection with the establishment of executive compensation other than to obtain independent third-party benchmarking surveys similar to the 2011 Competitive Analysis discussed above.

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Elements of 2011 Executive Compensation

Our executive compensation program is comprised of the following principal elements, each of which is described in more detail below:

Element of Compensation	Purpose	Pay-for-Performance Considerations
Cash and Short-Term Variable Compensation:		
Base Compensation	Provides competitive, fixed compensation to attract and retain exceptional executive talent	Adjustments to base salary consider the individual's overall performance, contribution to the business and internal and external comparisons
Cash Bonus	Encourages and rewards achievement of strong financial, operational and strategic performance by the Company	The amount of any discretionary bonus received by an executive officer, if any, depends on the degree we achieve strong annual financial, operational or strategic performance and the extent to which the executive officer contributes to the achievement
Long-Term Compensation:		
Stock Options	Encourages executive officers to focus on the long-term performance of the Company, links an executive officer's incentives to our stockholders' interests in increasing our stockholder value, encourages significant ownership of our common stock and promotes long-term retention of our executives officers	The potential appreciation in our stock price above the exercise price for stock options motivates our executives to build stockholder value as the executive officer only realizes value from the stock option if the stock price appreciates
Other Elements:		
Health, Retirement and Other Benefits	Provides broad-based market competitive employee benefits program such as participation in benefit plans generally available to our employees, including, employee stock purchase plan, 401(k) retirement plan, life, health and dental insurance and short-term and long-term disability plans	Not applicable

Base Compensation

We pay our Chief Executive Officer and Chief Commercial Officer a base salary, which we review and determine annually. We believe that a competitive base salary is a necessary element of any compensation program that is designed to attract and retain talented and experienced executives. We also believe that attractive base salaries can motivate and reward executives for their overall performance. Although base salaries are established in part based on the individual experience, skills and expected contributions during the coming year as well as each executive's performance during the prior year, we do not view base salaries as primarily serving our objective of paying for performance. Our Chief Financial Officer does not receive a base salary directly from the Company. We pay our Chief Financial Officer in accordance with a letter agreement with CFO Systems, LLC, under which CFO Systems provides financial leadership and consulting services to us. See "Agreements with Our Named Executive Officers - CFO

Systems Letter Agreement."

It is our goal to maintain a base compensation structure among our executives that, in our judgment, appropriately reflects their respective roles and responsibilities. Our executives' base compensation reflects the initial amounts that we negotiated with each of our executives at the time of his or her initial employment or promotion and our subsequent adjustments to these amounts, to reflect market increases, our growth, the individual executives' performance and increased experience, any changes in the individual executives' roles and responsibilities and other factors. Generally, the base compensation of our executives is based on our understanding of compensation for comparable positions at similarly situated companies at the time, the individual experience and skills of, and expected contribution from each executive, the roles and responsibilities of the executive, the base compensation of our existing executives and other factors.

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2011 Cash Incentive Bonus

During 2011, the Compensation Committee relied on a discretionary bonus program for its executives which left the decision of whether an executive, including a named executive officer, received a bonus to the discretion of the Compensation Committee. In exercising this discretion, the Compensation Committee had the authority to set desired goals and targets for the executive officer or consider other performance goals, current economic conditions and exceptional and/or inadequate performances by each executive officer when evaluating whether and to what extent to award bonuses. The discretionary bonus awards earned by our named executive officers in 2011 are set forth in the "Summary Compensation Table" below and in the section below entitled "Analysis of Named Executive Officer Compensation."

2012 Bonus Plan

In 2012, the Compensation Committee established an incentive bonus plan (the "2012 Bonus Plan") which provides variable incentive compensation to our executives, including our named executive officers, and senior management. The 2012 Bonus Plan provides bonus opportunities tied to specific corporate-level and individual goals for payments ranging from 0% of the applicable bonus opportunity, if the threshold performance levels are not attained, to 225% of the applicable bonus opportunity, if all performance is above the levels established to qualify for maximum payouts. Performance attainment levels of the targeted performance objectives range from 5% to 60% and correspond to payment levels ranging from 0% to 225% of the target bonus opportunity.

The 2012 Bonus Plan provides that payments senior management, excluding our named executive officers, will be paid as cash bonuses. However, with respect to our named executive officers, the plan provides that our named executive officers will be paid as follows:

Target Attainment Percentage	Form of Payment
100%	Cash
Above 100%	50% Cash 50% Restricted Stock

The Compensation Committee believes that providing for payment of a portion of the incentive compensation earned by our named executive officers supports links the executives' incentives to our stockholders' interests in increasing stockholder value and provides executive officers with incentives to stay. We also believe that the payment of on-target performance, and a portion of above-target performance as a cash incentive supports our pay for performance philosophy and encourages an executive officer's contribution to, and rewards an executive officer for, Company-wide performance and the attainment of specific operational and financial goals that are controlled by or can be directly impacted by the executive officer.

Individualized bonus plans are established for each participant, including our named executive officers, with performance metrics and related targets that include a mix of company-level financial metrics and business unit or individual metrics tailored to include the important factors under the executive's control. The company-level metrics consist of net revenue, MEBITDA and a p/s multiple.The individual performance metrics are specific operational and financial goals that are controlled by or can be directly impacted by the individual and include for instance, objectives related implementation of investment relations, product initiatives and other corporate strategies, organizational development, targeted product revenues as well as other objectives tailored to the individual The objective of the 2012 Bonus Plan is to encourage executives to contribute toward the attainment of the Company's consolidated financial and performance goals for fiscal year 2012. See "Analysis of Named Executive Officer Compensation" below for the on-target bonus opportunities awarded to our named executive officers under the 2012 Bonus Plan.

Long-Term Equity Incentive Compensation

We grant long-term equity incentive awards in the form of stock options to executives as part of our total compensation package. We place a significant emphasis on performance-based incentive compensation. These awards generally represent a significant portion of total executive compensation. We use long-term equity incentive awards in order to align the interests of our executives and our stockholders by providing our executives with strong incentives to increase stockholder value and a significant reward for doing so. Our decisions regarding the amount and type of long-term equity incentive compensation and relative weighting of these awards among total executive compensation have also been based on our understanding of market practices and take into account additional factors such as level of

individual responsibility, experience and performance.

Stock option awards provide our executive officers with the right to purchase shares of our common stock at a fixed exercise price typically for a period of up to ten years, subject to continued employment with our Company. Stock options are earned based on continued service to us and generally vest over three years, with one-third vesting on each anniversary of the date grant.

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All our stock options awards are granted pursuant to our 2006 Equity Incentive Plan (the "2006 Incentive Plan") and the exercise price of each stock option granted under our 2006 Incentive Plan is based on the fair market value of our common stock on the grant date. Under the term of the 2006 Incentive Plan, when the Company is not listed on a national stock exchange but traded on an over-the-counter market, fair market value is defined as the average of the bid and ask price of our common stock on the trading date immediately preceding the grant date. See "Equity Incentive Plan and Other Compensation Plans - 2006 Equity Incentive Plan" for additional information on the 2006 Incentive Plan.

Broad-Based Benefits Programs

All full-time employees in the United States, including our named executive officers, may participate in our health and welfare benefit programs, including medical coverage, dental coverage, disability insurance, life insurance and our 401(k) plan. We offer similar plans in foreign countries.

Equity Incentive Plan and Other Compensation Plans

2006 Equity Incentive Plan.

The Company's 2006 Incentive Plan allows the Company to make awards of various types of equity-based compensation, including stock options, dividend equivalent rights ("DERs"), stock appreciation rights, restricted stock, restricted stock units, performance units, performance shares and other awards, to employees and directors of the Company. The 2006 Incentive Plan provides that the total number of shares of common stock that the Company may issue is 10,000,000 shares under the 2006 Incentive Plan; provided, that no more than 5,000,000 of such shares may be used for grants of restricted stock, restricted stock units, performance units, performance shares and other awards. As of March 7, 2012, there were 4,157,333 outstanding options granted under the 2006 Incentive Plan, of which 2,251,378 may be exercised at this time.

The 2006 Incentive Plan is administered by the Compensation Committee of the Board of Directors which has the authority to set the number, exercise price, term and vesting provisions of the awards granted under the 2006 Incentive Plan, subject to the terms thereof. Either incentive or non-qualified stock options may be granted to employees of the Company, but only non-qualified stock options may be granted to non-employee directors and advisors. However, in either case, the 2006 Incentive Plan requires that stock options must be granted at exercise prices not less than the fair market value of the common stock on the date of the grant. Options issued under the 2006 Incentive Plan vest over periods as determined by the Compensation Committee and expire ten years after the date the option was granted. Compensation expense is based on the calculated fair value of the awards as measured at the grant date and is expensed ratably over the service period of the awards (generally the vesting period).

Employee Savings Plan.

The Company maintains an employee savings plan that is intended to qualify as a tax-qualified plan under Section 401(k) of the Internal Revenue Code. This plan allows for voluntary contributions up to statutory maximums by eligible employees. Historically, we matched a specific proportion of these contributions, subject to limitations imposed by law. We may make additional contributions to the savings plan on behalf of our employees if our Board of Directors decides to do so. For the year ended December 31, 2009 we discontinued matching 401(k) contributions for the third and fourth quarters due to our expense reduction initiatives. We reinstated matching 401(k) contributions for the first three quarters of 2010; however, effective October 1, 2010, we again discontinued matching 401(k) contributions. Our named executive officers are eligible to participate in the 401(k) retirement plan. We did not make any matching contributions to any employees, including our named executive officers, during 2011.

Analysis of Named Executive Officer Compensation

In connection with establishment of 2011 compensation for our named executive officers, our Chief Executive Officer and the Compensation Committee reviewed the market compensation data contained in the 2011 Competitive Analysis. Our Chief Executive Officer, in consultation with the Chairman of our Compensation Committee, identified the comparable positions for each of our named executive officers in the 2011 Competitive Analysis based on their positions and responsibilities. Our Chief Executive Officer then made compensation recommendations for our executives, excluding his own, and senior management. Although our Chief Executive Officer makes executive compensation recommendations to the Compensation Committee, the Compensation Committee is ultimately responsible for approving all executive compensation.

The Compensation Committee considered the Chief Executive Officer recommendations and also reviewed the 2011 Competitive Analysis to ensure that the compensation programs for our key senior managers, including our named executive

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officers, are consistent with our compensation philosophy and remain within broadly competitive norms.

In addition to reviewing competitive market data, the Compensation Committee also believes that individual compensation should reflect an executive officer's position and value to our organization considering individual contribution to business results, knowledge and skills, and market value and that individual compensation should also take into consideration long-term potential of the executive officer to contribute to our financial position and retention concerns, if any, for individual executives.

In determining our Chief Executive Officer's compensation, in addition to a review of the 2011 Competitive Analysis, the Compensation Committee specifically considers the Board of Director's evaluation of the his performance.

After reviewing the 2011 Competitive Analysis and considering the recommendations made by our Chief Executive Officer, the Compensation Committee determined the terms and amount of compensation to pay to each of our executive officers.

Set forth below is a summary of the decisions related to 2011 executive compensation for each of our named executive officers made during 2011 as well as additional information regarding decisions made related to the 2012 executive compensation for our named executive officers.

Craig J. Tuttle, President and Chief Executive Officer

The Compensation Committee reviews our Chief Executive Officer's compensation and the terms of his employment agreement on an annual basis in connection with the review of all other executive officers' compensation. See “Agreements with Our Named Executive Officers - CEO Employment Agreement” for additional information on the Mr. Tuttle's employment agreement. Based on a review of the 2011 Competitive Analysis, Mr. Tuttle received a grant of 500,000 stock option awards but he did not receive an increase to his base salary; therefore, his base salary of $325,000 remained the same. The Compensation Committee also awarded a discretionary cash bonus to Mr. Tuttle in the amount of $10,000 in recognition of his performance during 2011, including, without limitation, his integration of the FAMILION product line into the Company's operations and his effective management of costs.

In 2012, based on a review of the performance of Mr. Tuttle during 2011 and the first quarter of 2012 which included the cost effective management and the successful completion of a private placement offering, the Compensation Committee increased Mr. Tuttle's base salary from $325,000 to $350,000, a 7.7% increase, effective March 1, 2012 which reflects the first increase in Mr. Tuttle's base salary since 2008. Under the 2012 Bonus Plan, Mr. Tuttle's annual on-target bonus opportunity is $175,000.

Brett L. Frevert, Chief Financial Officer

Mr. Frevert serves as Chief Financial Officer pursuant to the terms a letter agreement with CFO Systems and therefore, Mr. Frevert does not receive a base salary; rather, payments for Mr. Frevert's services are paid directly to CFO Systems. See “Agreements with Our Named Executive Officers - CFO Systems Letter Agreement” for additional information on the terms of this letter agreement. During 2011, we paid CFO Systems $242,250 Mr. Frevert's services. Based on a review of the 2011 Competitive Analysis, Mr. Frevert received a grant of 250,000 stock option awards. The Compensation Committee also awarded a discretionary cash bonus to Mr. Frevert in the amount of $5,000 in recognition of his performance during 2011, including, without limitation, his support of the integration of the FAMILION business into the Company's operations, the successful audit of the FAMILION line of business and his cost effective management of the senior financial officers and our financial resources.

Under the 2012 Bonus Plan, Mr. Frevert's annual on-target bonus opportunity is $125,000.

Chad M. Richards, Chief Commercial Officer

Based on a review of the 2011 Competitive Analysis, the Compensation Committee increased Mr. Richards' base salary from $188,708 to $199,167, a 5.5% increase and he received a grant of 250,000 stock options. During 2011, Mr. Richards also participated in the Company's 2011 sales incentive plan which was available for all Company sales personnel. This plan provided Mr. Richards with an opportunity to receive incentive compensation based on total net sales as reported in the Company's quarterly financial statements. Mr. Richards' annual on-target incentive opportunity under this plan was $100,000. Because the Company did not achieve the net sales performance target, Mr. Richards did not receive any compensation under this plan. The Compensation Committee also awarded a discretionary cash bonus to Mr. Richards in the amount of $6,000 in recognition of his performance during 2011, including, without

limitation, his effective integration of the FAMILION product line into the Company's operations.
During 2012, Mr. Richards will not participate in the Company's sales incentive plan, but he will participate in the 2012 Bonus Plan. Under the 2012 Bonus Plan, Mr. Richards' annual on-target bonus opportunity is $125,000.

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Tax and Accounting Implications

Deductibility of Executive Compensation

Section 162(m) of the Internal Revenue Code, as amended (the "Code") limits the deductibility of compensation in excess of $1 million paid to our named executive officers, unless the compensation qualifies as "performance-based compensation." Among other things, in order to be deemed performance-based compensation, the compensation must be based on the achievement of pre-established, objective performance criteria and must be pursuant to a plan that has been approved by our stockholders. It is intended that all performance-based compensation paid in 2011 to our named executive officers under the plans and programs described above will qualify for deductibility, either because the compensation is below the threshold for non-deductibility provided in Section 162(m) of the Code, or because the payment of amounts in excess of $1 million qualify as performance-based compensation under the provisions of Section 162(m) of the Code.

We believe that it is important to continue to be able to take all available company tax deductions with respect to the compensation paid to our named executive officers. Therefore, we believe we have taken all actions that may be necessary under Section 162(m) of the Code to continue to qualify for all available tax deductions related to executive compensation. However, we also believe that preserving flexibility in awarding compensation is in our best interest and that of our stockholders, and we may determine, in light of all applicable circumstances, to award compensation in a manner that will not preserve the deductibility of such compensation under Section 162(m) of the Code.

Accounting for Share-Based Compensation

We account for share-based compensation awards, including our stock options, in accordance with the requirements of Financial Accounting Standards Board Accounting Standards Codification Topic 718, Compensation - Stock Compensation (formerly FASB Statement 123R, "Share-Based Payment"). Before we grant stock-based compensation awards, we consider the accounting impact of the award as structured and under various other scenarios in order to analyze the expected impact of the award.

Agreements with Our Named Executive Officers
CEO Employment Agreement
The Company has entered into an employment agreement dated July 12, 2008 with Craig J. Tuttle, our President and Chief Executive Officer. The employment agreement provides that the term of the agreement will be one year, but shall be automatically extended for additional one year terms unless either the Company or Mr. Tuttle provides written notice to the other of an intention not to extend no later than sixty (60) days prior to the end of the then current term. The employment agreement automatically renewed for an additional year ending on July 12, 2012.

The employment agreement provides that Mr. Tuttle will be entitled to receive severance payments from the Company if his employment is terminated involuntarily except if such termination is based on "just cause", as that term is defined in the employment agreement. The severance payment payable in such circumstances is equal to his annual base salary at the time of termination and will be paid to him over a twelve-month period. The employment agreement provides that the severance payment provisions will be honored if the Company is acquired by, or merged into, another company and his position is eliminated as a result of such acquisition or merger. This severance payment is designed to provide him with an amount of cash sufficient to provide for living expenses and other needs which would normally be paid from his monthly base salary payments in situations where the executive officer's employment was not terminated voluntarily or for just cause. In addition, the payments are designed so as to not exceed the maximum amount which may be paid without imposition of the excise tax imposed by Section 4999 of the Internal Revenue Code or resulting in a loss of the Company's income tax deduction for any portion of these payments under Section 280G of the Internal Revenue Code if such payments are made after, or in contemplation of, a change of

control transaction.

CFO Systems Letter Agreement

Effective June 30, 2010, we entered into a letter agreement with CFO Systems and Brett L. Frevert. Under the letter agreement CFO Systems will provide financial and consulting services to us at rates of $75 to $150 per hour depending on the level of expertise involved. The services will include providing Chief Financial Officer duties and other financial and accounting expertise on a time share basis. The letter agreement provides that either CFO Systems or the Company may terminate the agreement upon thirty (30) days written notification. In connection with the letter agreement, Mr. Frevert agreed to serve as our Chief Financial Officer. We were charged $405,763 and $126,459 for the services provided by CFO Systems during 2011 and 2010, respectively. The 2011 fees included $242,250 for Mr. Frevert's services and $150,327 for other professionals services, primarily related to support the audit of the FAMILION business and the integration of it into our ongoing business.

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Compensation Risk Analysis

We have reviewed our material compensation policies and practices for all employees and have concluded that these policies and practices are not reasonably likely to have a material adverse effect on the Company. While risk-taking is a necessary part of growing a business, our compensation philosophy, as discussed above is focused on aligning compensation with the long-term interests of our stockholders as opposed to rewarding short-term management decisions that could pose long-term risks.

REPORT OF THE COMPENSATION COMMITTEE

We, the Compensation Committee of the Board of Directors of the Company, have reviewed and discussed the Compensation Discussion and Analysis set forth above with the management of the Company, and, based on such review and discussion, have recommended to the Board of Directors inclusion of the Compensation Discussion and Analysis in the Company's Annual Report on Form 10-K for the year ended December 31, 2011 and its Proxy Statement for the 2012 Annual Meeting of Stockholders.

MEMBERS OF THE COMPENSATION COMMITTEE:

Antonius P. Schuh, Ph.D.
Rodney .S. Markin, MD, Ph,D.
Robert M. Patzig

Compensation Committee Interlocks And Insider Participation

No member of the Compensation Committee was at any time during 2011, or at any other time, an officer or employee of the Company. No executive officer of the Company serves as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our Board or its Compensation Committee.

2011 EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth compensation awarded to, paid to, or earned by our "named executive officers" for services rendered during fiscal years 2011, 2010 and 2009.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards[1] $	All Other Compensation ($)	Total ($)
Craig J. Tuttle [2]	2011	$325,000	$10,000	$457,950	$12,102	$805,052
President and	2010	325,000	—	—	18,377 [3]	343,377
Chief Executive Officer	2009	325,000	—	—	17,559 [3]	342,559
Brett L. Frevert [4]	2011	—	5,000	228,975	242,250 [4]	476,225
Chief Financial Officer	2010	—	—	—	96,225 [4]	96,225
Chad M. Richards[5]	2011	199,167	6,000	228,975	9,338 [6]	443,480
Chief Commercial Officer	2010	188,708	—	—	13,476 [6]	202,184

2009	182,250	—	—	11,340	[6] 193,590

[1] The amounts in this column reflect the aggregate grant date fair value of the stock option awards granted during the respective fiscal year as computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, Compensation--Stock Compensation ("FASB ASC Topic 718"), excluding the effect of estimated forfeitures. The amounts shown do not correspond to the actual value that will be recognized by the named executive officer. The assumptions used in the calculation of these amounts are included in footnote B. to the Company's audited financial statements for the fiscal year ended December

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31, 2011 included in this Annual Report. See the "2011 Grants of Plan-Based Awards" table for information on stock options granted in 2011.

(2) See “Agreements with Our Named Executive Officers--CEO Employment Agreement” for a description of Mr. Tuttle's employment agreement with the Company.

(3) Amounts paid to Mr. Tuttle in 2011 consisted of an automobile allowance as provided in his employment agreement, group life insurance and long term disability insurance. Amounts paid to Mr. Tuttle in 2010 and 2009 consisted of an automobile allowance as provided in his Employment Agreement, a 401(k) matching contribution, group life insurance and long term disability insurance.

(4) Mr. Frevert began serving as our Chief Financial Officer effective June 30, 2010 when we entered into a letter agreement with CFO Systems relating to his service. All compensation received by Mr. Frevert represents amounts paid to CFO Systems for Mr. Frevert's services as our Chief Financial Officer. See “Agreements with Our Named Executive Officers - Letter Agreement with CFO Systems” for a description of the arrangement with CFO Systems.

(5) Mr. Richards joined the Company as Senior Vice President, Sales and Marketing on October 8, 2007 and was promoted to Chief Commercial Officer in January 2011.

(6) Amounts paid to Mr. Richards in 2011 consisted of group life insurance and long term disability insurance Amounts paid to Mr. Richards in 2010 and 2009 consisted of a 401(k) matching contribution, group life insurance and long term disability insurance.

2011 Grants of Plan-Based Awards

The following table sets forth certain information with respect to grants of plan-based awards in fiscal year 2011 to our named executives. The option awards granted to our named executive officers in fiscal year 2011 were granted under our 2006 Incentive Plan. The option awards during 2011 have time-based vesting, with one-third vesting occurring evenly during each of the first three years from the date of grant. Each option award has a term of ten years.

Name	Grant Date	All Other Option Awards: Number of Securities Underlying Options (#)	Exercise or Price of Option Awards ($/sh) (1)	Grant Date Fair Value of Option Awards ($)(2)
Craig J. Tuttle	5/18/2011	500,000	$1.19	$457,950
Brett L. Frevert	5/18/2011	250,000	$1.19	228,975
Chad M. Richards	5/18/2011	250,000	$1.19	228,975

(1)The exercise price of stock options awarded represents the fair market value of our common stock on the date of grant as defined in our 2006 Incentive Plan.

(2) The amounts in this column reflect the aggregate grant date fair value of the stock option awards granted during the respective fiscal year as computed in accordance with FASB ASC Topic 718, excluding the effect of estimated forfeitures. The amounts shown do not correspond to the actual value that will be recognized by the named executive officer. The assumptions used in the calculation of these amounts are included in footnote B. to the Company's audited financial statements for the fiscal year ended December 31, 2011 included in this Annual Report.

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Outstanding Equity Awards at Fiscal 2011 Year-End

The following table provides certain information concerning outstanding option awards held by our named executive officers as of December 31, 2011.

Name	Option Award / Grant Date	Option Awards Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date
Craig J. Tuttle	9/1/2006	200,000	—	$0.69	8/31/2016
Craig J. Tuttle	1/17/2007	200,000	—	0.75	1/16/2017
Craig J. Tuttle	7/12/2007	200,000	—	0.66	7/11/2017
Craig J. Tuttle	5/18/2011	—	500,000	1.19	5/17/2021
Brett L. Frevert	5/18/2011	—	250,000	1.19	5/17/2021
Chad M. Richards	10/8/2007	200,000		0.69	10/7/2017
Chad M. Richards	5/18/2011	—	250,000	1.19	5/17/2021

Fiscal Year 2011 Option Exercises and Stock Vested

No stock options were exercised by any of our named executive officers during fiscal year 2011.

POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE OF CONTROL

Except for the employment agreement with Mr. Tuttle and the letter agreement with CFO Systems and Mr. Frevert described above, none of our named executive officers have employment or severance agreements with the Company and their employment may be terminated at any time; provided; however, the services of Mr. Frevert are governed by a letter agreement between the Company, CFO Systems and Mr. Frevert which requires thirty days written notice prior to termination.

2006 Equity Incentive Plan

Stock Options. The 2006 Incentive Plan provides that if an optionee, including a named executive officer, voluntarily terminates employment with the Company, all unvested stock options will terminate and the optionee will have three months from the date of termination to exercise any vested stock options granted under the 2006 Incentive Plan. However, the 2006 Incentive Plan also provides that if the optionee's employment terminates due to death, disability or retirement, all stock options will immediately vest upon the optionee's death or disability and the optionee (or his or her estate or personal representative) will have twelve months from the date of death, disability or retirement to exercise the stock options; provide, such optionee had continuously served as an employee, director or advisor for at least three years, or such shorter period as the Compensation Committee may prescribe. The plan also provides that all stock options will immediately vest upon the occurrence of a change-in-control of the Company.

Potential Post Termination Benefits Table

The tables below quantify certain compensation that would have become payable to our named executive officers in the event such executive officer's employment had terminated on December 31, 2011 under various circumstances. The estimates set forth in the table below are based on our named executive officers' compensation and service levels as of such date and, if applicable, the closing stock price of our common stock on that date which was $1.29. These benefits are in addition to benefits generally available to salaried employees such as distributions under our 401(k) Plan, disability benefits and accrued vacation pay.

Due to the number of factors that affect the nature and amount of any benefits provided upon the events discussed below, any actual amounts paid or distributed to our named executive officers may be different. Factors that could affect these amounts

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include the timing of any such event, our stock price and the executive's age.

Name	Benefit	Cause	Without Cause[1]	Voluntary Termination	Change in Control[2]	Death[2]	Disability[2]	Retirement[2]
Craig. J. Tuttle	Cash	$—	$350,000	$—	$350,000	$—	$—	$—
	Stock options	—	354,000	—	404,000	404,000	404,000	404,000
	Benefits	—	—	—	—	—	—	—
	Total	$—	$704,000	$—	$754,000	$404,000	$404,000	$404,000
Brett L. Frevert	Cash	$—	$—	$—	$—	$—	$—	$—
	Stock options	—	—	—	25,000	25,000	25,000	25,000
	Benefits	—	—	—	—	—	—	—
	Total	$—	$—	$—	$25,000	$25,000	$25,000	$25,000
Chad M. Richards	Cash	$—	$—	$—	$—	$—	$—	$—
	Stock options	—	120,000	—	145,000	145,000	145,000	145,000
	Benefits	—	—	—	—	—	—	—
	Total	$—	$120,000	$—	$145,000	$145,000	$145,000	$145,000

(1) The amount reflected for stock options is equal to the number of stock options exercisable as of December 31, 2011 multiplied by the difference between the stock price as of that date ($1.29) and the stock option exercise price. The value represents the net proceeds the named executive would have earned as of that date assuming exercise of the stock options.

(2) The amount reflected for stock options is equal to the total number of stock options outstanding as of December 31, 2011 multiplied by the difference between the stock price as of that date ($1.29) and the stock option exercise price. The value represents the net proceeds the named executive would have earned as of that date assuming exercise of the stock options.

DIRECTOR COMPENSATION

It is our Board's general policy that compensation for independent directors should be a mix of cash and equity-based compensation. As part of a director's total compensation, and to create a direct linkage with corporate performance and stockholder interests, our Board believes that a meaningful portion of a director's compensation should be provided in, or otherwise based on, the value of appreciation in our common stock.

Our Board of Directors has the authority to approve all compensation payable to our directors, although our Compensation Committee is responsible for making recommendations to our Board regarding this compensation. Additionally, our Chief Executive Officer may also make recommendations or assist our Compensation Committee in making recommendations regarding director compensation. Our Board of Directors and Compensation Committee annually review our director compensation. In connection with director compensation decisions in 2011, our Board and the Compensation Committee reviewed market director compensation data paid by companies in the life sciences industry as reported by Top 5 Data Services, Inc. (the “2011 Director Competitive Analysis”). The 2011 Director

Competitive Analysis contained data for 217 publicly traded medical device (“MD) companies and 331 biopharmaceutical companies, with 65 companies assigned to both sectors based on their mix of products. Based on its review of the 2011 Director Competitive Analysis, the Board made changes to our director compensation program which are further discussed below.

Cash Compensation

Directors who are also employees of the Company are not separately compensated for serving on the Board of Directors

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other than reimbursement for out-of-pocket expenses related to attendance at Board and committee meetings. Independent directors are paid an annual retainer of $20,000 and they receive reimbursement for out-of-pocket expenses related to attendance at Board and committee meetings. Independent directors serving on any committee of the Board of Directors are paid an additional annual retainer of $2,500 unless they are also a chairman of a committee. The chairman of the Audit Committee receives an additional annual retainer of $8,000 and the chairman of any other committee receives an additional annual retainer of $4,000. All directors' fees paid annually or quarterly were prorated for partial periods. In addition, any independent director who attends more than four meetings per quarter, which includes committee meetings, receives $500 for each meeting attended over the four.

Equity-Based Compensation

Our practice during 2010 was to grant each new independent director an option to purchase 15,000 shares of common stock under our 2006 Incentive Plan at the next Compensation Committee meeting following a director's initial appointment to the Board. The options granted to an independent director upon initial appointment to the Board vested at the rate of 33 1/3% per year of service on the Board.

Beginning in 2011, our practice changed to grant each new independent director an option to purchase 40,000 shares of common stock under our 2006 Incentive Plan at the next Compensation Committee meeting following a director's initial appointment to the Board, which option vests after one (1) year.

Our practice during 2010 was to grant annually to each continuing independent director an option to purchase 5,000 shares of common stock, which option vested after three (3) years.

Our practice changed in 2011 to grant annually to each continuing independent director an option to purchase 25,000 shares of common stock, which option vests after one (1) year. Additional annual grants of options will be made each year by the Compensation Committee in its sole discretion. All options granted to independent directors have exercise prices that represented the fair market value of our stock on the grant date.

On March 2, 2011 (the grant date), our independent directors were each granted a non-qualified option to purchase 25,000 shares of our common stock with an exercise price equal to $0.74.

Director Summary Compensation Table

The following table provides information regarding the Company's compensation for non-employee directors during the year ended December 31, 2011. Directors who are employees of the Company do not receive compensation for serving on the Board of Directors or its committees.

Name	Fees Earned or Paid in Cash ($)	Option Awards $ [(1)]	Total ($)
Doit Koppler	$21,000	$23,309	$44,309
Robert Patzig	18,750	23,309	42,059
Rodney Markin, M.D., Ph.D.	25,375	14,568	39,943
Antonius Schuh, Ph.D	23,625	14,568	38,193

[(1)] The amounts reflected in this column reflect the grant date fair value of each option award granted during 2011, as determined in accordance with FASB ASC Topic 718. The amounts shown do not correspond to the actual value that will be realized by the independent director. The assumptions used in the calculation of these amounts are included in footnote B. to the Company's audited financial statements for the fiscal year ended December 31, 2011, included in this Annual Report. The grant date fair value of the options granted to our independent directors on March 2, 2011 was $0.58 per option. The aggregate grant date fair value for all options granted to our independent directors on March 2, 2011 was $75,754.

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The following table sets forth each independent director's aggregate number of option awards outstanding as of December 31, 2011:

Name	Vested Stock Option Awards	Unvested Stock Option Awards	Aggregate Stock Option Awards
Doit Koppler, II	—	40,000	40,000
Robert Patzig	—	40,000	40,000
Rodney Markin, M.D., Ph.D	20,000	35,000	55,000
Antonius Schuh, Ph.D	10,000	35,000	45,000

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Equity Compensation Plan Information

The following equity compensation plan information summarizes plans and securities approved and not approved by security holders as of December 31, 2011.

PLAN CATEGORY	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted-average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders [1]	4,172,000	$1.10	4,944,231
Equity compensation plans not approved by security holders	—	—	—
Total	4,172,000	$1.10	4,944,231

(1) Consists of our 2006 Equity Compensation Plan

Beneficial Ownership of Common Stock

As of March 7, 2012, there were 71,625,725 issued and outstanding shares of our common stock. Each share of common stock is entitled to one vote on each matter to be voted on by the holders of our common stock at the 2012 Annual Meeting of Stockholders. Common stockholders do not have the right to cumulate votes in the election of directors.

The following table provides information known to us with respect to beneficial ownership of our common stock by our directors and all nominees for director, by those of our executive officers who are named in the Summary Compensation Table, by all of our current executive officers and directors as a group, and by each person we believe beneficially owns more than 5% of our outstanding common stock as of March 7, 2012. Except as indicated in the footnotes to this table, to our knowledge the persons named in the table below have sole voting and investment power with respect to all of common stock of the Company beneficially owned and such shares are owned directly by such person. The number of shares beneficially owned by each person or group as of March 7, 2012 includes shares of common stock that such person or group had the right to acquire on or within 60 days after March 7, 2012, including, but not limited to, upon the exercise of options or warrants to purchase common stock or the conversion of securities into common stock. Beneficial ownership information of persons other than our current executive officers and directors is based on available information including, but not limited to, Schedules 13D, 13F or 13G filed with the SEC or information supplied by these persons.

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Name and Address of Beneficial Owner[1]	Number of Shares Beneficially Owned		Percent of Class
Directors and Executive Officers			
Craig J. Tuttle, President and Chief Executive Officer, Director	600,000	[2]	*
Brett L. Frevert, Chief Financial Officer	—	[3]	*
Chad M. Richards, Chief Commercial Officer	243,800	[4]	*
Doit L. Koppler II, Director	107,500	[5]	*
Rodney S. Markin, M.D., Ph.D, Director	45,000	[6]	*
Robert M. Patzig, Director	92,500	[7]	*
Antonius P. Schuh, Ph.D, Director	35,000	[8]	*
All directors and executive officers as a group (7 persons)	1,123,800	[9]	1.5%
Other Stockholders			
LeRoy C. Kopp	14,156,661	[10]	19.8%
AMH Equity, LLC and Leviticus Partners, L.P.	4,621,181	[11]	6.5%
Kevin Douglas	4,000,000	[12]	5.6%
Austin W. Marxe and David M. Greenhouse	5,250,000	[13]	7.2%
Randal J. Kirk	20,263,131	[14]	22.1%

* Represents less than 1% of the outstanding common stock of the Company.

[1] The address for all of our directors and executive officers is the address of the Company's principal executive offices located at 12325 Emmet Street, Omaha, Nebraska 68164.

[2] Includes 600,000 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 7, 2012.

[3] Includes 0 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 7, 2012.

[4] Includes 43,800 shares owned by Mr. Richards and includes 200,000 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 7, 2012.

[5] Includes 50,000 shares owned by Mr. Koppler and includes 57,500 shares issuable upon the exercise of options and warrants that are exercisable or will become exercisable within 60 days after March 7, 2012.

[6] Includes 45,000 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 7, 2012.

[7] Includes 40,000 shares owned by Mr. Patzig and includes 52,500 shares issuable upon the exercise of options and warrants that are exercisable or will become exercisable within 60 days after March 7, 2012.

[8] Includes 35,000 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 7, 2012.

[9] Includes shares which may be acquired by executive officers and directors as a group within 60 days after March 7, 2012 through the exercise of stock options or warrants.

(10) Consists of shares owned directly by Mr. Kopp, shares held in individual retirement accounts established for Mr. Kopp and

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his spouse; shares held in the Kopp Family Foundation of which he is a director; and shares held in discretionary client accounts managed by Kopp Investment Advisors, LLC of which he is the Chief Executive Officer. The business address of each of these beneficial owners is 7701 France Avenue South, Suite 500, Edina, Minnesota 55435.

(11) Consists of shares held by AMH Equity, LLC which is the general partner of Leviticus Partners, L.P. The business address of this beneficial owner is 60 East 42nd Street, Suite 901, New York, New York 10165.

(12) Mr. Douglas has dispositive power over all of the shares owned by the Douglas affiliates. The Douglas affiliates include shares owned directly by James E. Douglas,III as well as shares held in the following trusts: K&M Douglas Trust, Douglas Family Trust and the Douglas Irrevocable Descendants Trust . The business address of this beneficial owner is 125 East Sir Francis Drake Boulevard, Suite 400, Larkspur, California, 94939.

(13) Includes 3,500,000 shares owned and 1,750,000 shares issuable upon the exercise of warrants that are exercisable or will become exercisable within 60 days after March 7, 2012. MGP is the general partner of the Special Situations Fund III, QP, L.P. AWM Investment Company, Inc. (“AWM”) is the general partner of MGP and the investment adviser to the Special Situations Fund III, QP, L.P., Special Situations Private Equity Fund, L.P. and Special Situations Life Sciences Fund, L.P. Austin W. Marxe and David M. Greenhouse are the principal owners of MGP and AWM. Through their control of MGP and AWM, Messrs. Marxe and Greenhouse share voting and investment control over the portfolio securities of each of the funds listed above. The business address of these beneficial owner is 527 Madison Avenue, Suite 2600, New York, New York 10022.

(14) Includes 3,245,903 shares owned and consists of (i) warrants to purchase 1,500,000 shares of common stock; (ii) shares of Series A Convertible Preferred Stock (the “Preferred Stock”) convertible into 10,344,820 shares of common stock; and (iii) warrants to purchase shares of the Preferred Stock which are convertible into 5,172,408 shares of common stock. These shares and warrants are held 40% by Third Security Senior Staff 2008 LLC, 40% by Third Security Staff 2010 LLC and 20% by Third Security Incentive 2010 LLC, which companies are affiliated with the beneficial owner. Mr. Randal J. Kirk could be deemed to have indirect beneficial ownership of these shares. The business address of these beneficial owners is 1881 Grove Avenue, Radford, Virginia 24141.

Beneficial Ownership of Preferred Stock

As of March 7, 2012, there were 2,586,205 issued and outstanding shares of our Preferred Stock. Each share of Preferred Stock is entitled to one vote on each matter to be voted on by the Preferred Stockholders at the Annual Meeting.

The following table provides information known to us with respect to beneficial ownership of the Preferred Stock by each person we believe beneficially owns more than 5% of our outstanding Preferred Stock as of March 7, 2012. The number of shares of Preferred Stock beneficially owned by each person or group as of March 7, 2012 includes shares of Preferred Stock that such person or group had the right to acquire on or within 60 days after March 7, 2012, including, but not limited to, upon the exercise of warrants to purchase Preferred Stock. Except as indicated in the footnotes to this table, to our knowledge the persons named in the table below have sole voting and investment power with respect to all of the Preferred Stock beneficially owned and such shares are owned directly by such person. Beneficial ownership information of such persons is based on available information including, but not limited to, Schedules 13D, 13F or 13G filed with the SEC or information supplied by these persons.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned		Percent of Class	
Randal J. Kirk	3,879,307	(1)	100	%

(1) Includes warrants to purchase 1,293,102 shares of the Preferred Stock. These shares of the Preferred Stock and warrants are held 40% by Third Security Senior Staff 2008 LLC, 40% by Third Security Staff 2010 LLC and 20% by Third Security Incentive 2010 LLC, which companies are affiliated with the beneficial owner. Mr. Randal J. Kirk could be deemed to have indirect beneficial ownership of these shares. The business address of these beneficial owners is 1881 Grove Avenue, Radford, Virginia 24141.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Review and Approval of Related Person Transactions

We recognize that related person transactions can present potential or actual conflicts of interest and create the appearance

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that our decisions are based on considerations which may not be in our best interests or the best interests of our stockholders. Accordingly, as a general matter, we prefer to avoid related person transactions. Nevertheless, we recognize that there are situations where related person transactions may be in, or may not be inconsistent with, our best interests. Pursuant to the Audit Committee Charter, the Audit Committee must review in advance and approve or reject all material transactions between the Company and a related party. The Audit Committee reviews and considers each transaction in light of the specific facts and circumstances presented. Related persons include our directors or executive officers and their respective immediate family members and 5% beneficial owners of our common stock. Our Board of Directors will also review related party transactions in accordance with applicable law and the provisions of our Third Amended and Restated Certificate of Incorporation.

In addition, our Business Ethics Policy establishes a policy on potential conflicts of interest. Under our Business Ethics Policy our directors and employees, including our executive officers, must promptly report any transaction, relationship or circumstance that creates or could be reasonably expected to create a conflict of interest. Members of our senior management, including our executive officers, and our Board of Directors may not engage in any activity giving rise to an actual or potential conflict of interest without the prior approval of the Audit Committee. Any waiver of this policy relating to our executive officers or directors may only be made by the Board of Directors and will be promptly disclosed to our stockholders as required by law or applicable exchange rules.

Third Security Convertible Promissory Notes and Conversion

On December 30, 2011, we entered into a Convertible Promissory Note Purchase Agreement (the “Note Purchase Agreement”) with Third Security Senior Staff 2008 LLC, a Virginia limited liability company, Third Security Staff 2010 LLC, a Virginia limited liability company, and Third Security Incentive 2010 LLC, a Virginia limited liability company (collectively, the “Third Security Entities”), in the aggregate amount of $3,000,000. The Third Security Entities are currently the holders of 100% of our Preferred Stock and collectively represent a more than 10% beneficial ownership interest in our common stock.

Under the Note Purchase Agreement, the Company sold to each of the Third Security Entities a convertible note which with a March 31, 2012 maturity date (collectively, the “Convertible Notes”). The Note Purchase Agreement and Convertible Notes provided for conversion of any amount remaining due to the Third Security Entities under the Convertible Notes into equity securities of the Company of the same class(es) or series and at the same price as the equity securities of the Company sold in the Company's first sale or issuance of its equity securities after December 30, 2011, in the aggregate amount of at least $3,000,000.

A majority of the disinterested directors approved the Company's entrance into the Note Purchase Agreement and issuance of the Convertible Notes to the Third Security Entities.

On February 2, 2012, we entered into a Securities Purchase Agreement (the “Purchase Agreement”) with certain institutional and other accredited investors (the “Investors”) pursuant to which the Company: (i) sold to the Investors an aggregate of 19,000,000 shares of the Company's Common Stock at a price per share of $1.00 (the “Common Shares”) for aggregate gross proceeds of approximately $19,000,000; and (ii) issued to the Investors warrants (the “Warrants”) to purchase up to an aggregate of 9,500,000 shares of Common Stock with an exercise price of $1.25 per share (collectively, the “Offering”). The Warrants may be exercised, in whole or in part, at any time from February 7, 2012 until February 7, 2017 and contain both cash and “cashless exercise” features.

As part of the Offering, in connection with the conversion of the Convertible Notes, the Third Security Entities received an aggregate of 3,000,000 Common Shares (the “Third Security Common Shares”) and Warrants to purchase up to 1,500,000 shares of Common Stock (the “Third Security Warrants”) upon the same terms as the Investors. As part of the Offering, our Preferred Stock Directors, Doit L. Koppler, II and Robert M. Patzig, purchased shares Common Shares and Warrants on the same terms as the other Investors.

In connection with the Offering, we also entered into a registration rights agreement with the Investors and the Third Security Entities (the “Registration Rights Agreement”). The Registration Rights Agreement requires that the Company file a registration statement with the SEC within forty-five (45) days of the closing date of the Offering for the resale by the Investors and the Third Security Entities of all of the Common Shares, the shares of Common Stock issuable upon exercise of the Warrants, the Third Security Common Shares, the shares of Common Stock issuable upon exercise of the Third Security Warrants and all shares of Common Stock issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect thereto.

A majority of the disinterested directors approved the Company's entrance into the Note Purchase Agreement, the issuance of the Convertible Notes to the Third Security Entities and the terms of the Offering.

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Director Independence

The Company is governed by our Board of Directors. Currently, each member of our Board, other than our President and Chief Executive Officer, Craig J. Tuttle, is an independent director and all standing committees of the Board are composed entirely of independent directors, in each case under NASDAQ's independence definition. For a director to be considered independent, the Board must determine that the director has no relationship which, in the opinion of the Board, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Members of the Audit Committee also must satisfy a separate SEC independence requirement, which provides that they may not accept directly or indirectly any consulting, advisory or other compensatory fee from the Company or any of its subsidiaries other than their directors' compensation. In addition, under SEC rules, an Audit Committee member who is an affiliate of the issuer (other than through service as a director) cannot be deemed to be independent. The four independent members of the Board of Directors are Rodney S. Markin, M.D., Ph.D, Doit L. Koppler, II, Robert M. Patzig and Antonius P. Schuh, Ph.D.

Item 14. Principal Accountant Fees and Services.

The following table shows information about fees paid, were billed or were expected to be billed by McGladrey & Pullen LLP, our independent auditor, during the fiscal years ended December 31, 2011 and 2010.

	2011	2010
Audit fees	$321,005	$205,315
Audit-related fees	25,999	127,200
Tax fees	30,190	34,055
All other fees	—	—
Total fees	$377,194	$366,572

Audit Fees. McGladrey & Pullen LLP billed us for professional services rendered for the audit of our annual financial statements for those fiscal years and to review our interim financial statements included in Quarterly Reports on Form 10-Q filed by us with the SEC during that year.

Audit-Related Fees. McGladrey & Pullen LLP billed us for audit-related services. Audit-related services generally include fees for the audits of our employee benefit plans and fees incurred in connection with services associated with SEC registration statements, periodic reports and other documents filed with the SEC. In 2010 we incurred fees related to the audits, review and consultation for our acquisition of the FAMILION family of genetic tests.

Tax Fees. McGladrey & Pullen LLP billed us for tax services. Tax services consist primarily of planning, advice and compliance, or return preparation, for U.S. federal, state and local, as well as international jurisdictions.

All Other Fees. McGladrey & Pullen LLP did not render any services other than the services described above in 2011 or 2010.

Pre-Approval of Audit and Non-Audit Services

Under the Audit Committee Charter, the Audit Committee is required to pre-approve all audit and non-audit services to be provided to us by our independent auditor and its member firms. All services provided by our independent auditor in 2011 were pre-approved by the Audit Committee.

Part IV

Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as part of this report:

1 Financial Statements. The following financial statements of the Registrant are included in response to Item 8 of this report:

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Report of Independent Registered Public Accounting Firm.
Consolidated Balance Sheets of the Registrant and Subsidiary as of December 31, 2011 and 2010.
Consolidated Statements of Operations of the Registrant and Subsidiary for the years ended December 31, 2011, 2010 and 2009.
Consolidated Statements of Stockholders' Equity of the Registrant and Subsidiary for the years ended December 31, 2011. 2010 and 2009.
Consolidated Statements of Cash Flows of the Registrant and Subsidiary for the years ended December 31, 2011, 2010 and 2009.
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 were filed as required by Item 15(a)(3) of this report. Exhibit numbers refer to the paragraph numbers under Item 601 of Regulation S-K:

3.1 Third Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to Registrant's Report on Form 10-Q filed on November 14, 2005.
3.2 Amended and Restated Bylaws of the Registrant (filed herewith).
4.1 Form of Certificate of the Registrant's Common Stock (incorporated by reference to Exhibit 4 to Registration Statement on Form S-1 (Registration No. 333-32174) filed on March 10, 2000).
4.2 Certificate of Designation of Series A Convertible Preferred Stock dated as of December 28, 2010 (incorporated by reference to Exhibit 3.1 to the Registrant's Report on Form 8-K filed on January 4, 2011).
*10.1 2006 Equity Incentive Plan of the Registrant (incorporated by reference to Exhibit 4(b) to Registration on Form S-8 (Registration No. 333-139999) filed on January 16, 2007.
*10.2 1999 UK Approved Stock Option Sub Plan of the Registrant (incorporated by reference to Exhibit 10.7 to Registration Statement on Form S-1 (Registration No. 333-32174) filed on March 10, 2000).
*10.3 Employment Agreement between the Company and Craig J. Tuttle dated July 12, 2006 (incorporated by reference to Exhibit 10.1 to Registrant's Report on Form 8-K filed on July 12, 2006.
*10.4 Amendment No. 1 to the Employment Agreement between the Company and Craig J. Tuttle, effective July 12, 2006 (incorporated by reference to Exhibit 10.1 to Registrant's Report on Form 10-Q filed on November 14, 2006.
10.5 License Agreement, dated September 1, 1994, between Registrant and Professor Dr. Gunther Bonn, et. al. and Amendment thereto, dated March 14, 1997 (incorporated by reference to Exhibit 10.14 to Registration Statement on Form S-1 (Registration No. 333-32174) filed on March 10, 2000).
10.6 License Agreement, dated August 20, 1997, between the Registrant and Leland Stanford Junior University (incorporated by reference to Exhibit 10.15 to Registration Statement on Form S-1 (Registration No. 333-32174) filed on March 10, 2000).
10.7 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 Registrant's Annual Report on Form 10-K filed on March 25, 2002).

10.8 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

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to Registrant's Annual Report on Form 10-K filed on March 25, 2002).
10.9 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 Registrant's Quarterly Report on Form 10-Q filed on August 14, 2002).
10.10 License Amendment Agreement, dated June 2, 2003, by and between Geron Corporation and the Registrant (incorporated by reference to Exhibit 10.2 to Registrant's Quarterly Report on Form 10-Q filed on August 12, 2003).
10.11 Supply Agreement, dated January 1, 2000, between the Registrant and Hitachi Instruments (incorporated by reference to Exhibit 10.16 to Registration Statement on Form S-1 (Registration No. 333-32174) filed on March 10, 2000).
10.12 Common Stock Purchase Warrant by and between the Registrant and Laurus Master Fund, Ltd., dated December 3, 2003 (incorporated by reference to Exhibit 10.4 to the Registration Statement on Form S-3 of the Registrant (Registration No. 333-111442) filed on December 22, 2003).
10.13 Registration Rights Agreement by and between the Registrant and Laurus Master Fund, Ltd., dated December 3, 2003 (incorporated by reference to Exhibit 10.5 to the Registration Statement on Form S-3 of the Registrant (Registration No. 333-111442) filed on December 22, 2003).
10.14 Securities Purchase Agreement by and between the Registrant and Laurus Master Fund, Ltd., dated February 19, 2004, as amended on April 15, 2004 (incorporated by reference to Exhibit 10.1 to the Registration Statement on Form S-3 of the Registrant (Registration No. 333-114661) filed on April 21, 2004).
10.15 Amendment to Securities Purchase Agreement and Related Document by and between the Registrant and Laurus Master Fund, Ltd., dated August 31, 2004 (incorporated by reference to Exhibit 10.1 to the Registration Statement on Form S-3 (Registration No. 333-118970) as filed on September 14, 2004).
10.16 Common Stock Purchase Warrant by and between the Registrant and Laurus Master Fund, Ltd., dated February 19, 2004, as amended on April 15, 2004 (incorporated by reference to Exhibit 10.3 to the Registration Statement on Form S-3 of the Registrant (Registration No. 333-114661) filed on April 21, 2004).
10.17 Registration Rights Agreement by and between the Registrant and Laurus Master Fund, Ltd., dated February 19, 2004 (incorporated by reference to Exhibit 10.4 to the Registration Statement on Form S-3 of the Registrant (Registration No. 333-114661) filed on April 21, 2004).

10.18 Common Stock Purchase Warrant by and between the Registrant and Laurus Master Fund, Ltd., dated August 31, 2004 (incorporated by reference to Exhibit 10.3 to the Registration Statement on Form S-3 (Registration No. 333-118970) as filed on September 14, 2004).
10.19 Form of Securities Purchase Agreement by and between the Registrant and various counter-parties dated September 22, 2005 (incorporated by reference to Exhibit 10.1 to the Registrants Quarterly Report on Form 10-Q filed on November 14, 2005).
10.20 Common Stock Purchase Warrant by and between the Registrant and Oppenheimer & Co., Inc. dated October 27, 2005 (incorporated by reference to Exhibit 10.34 to the Registrants Annual Report on Form 10-K filed on March 31, 2006).
10.21 Letter Agreement by and between the Registrant and Laurus Master Fund, Ltd. dated October 31, 2005 (incorporated by reference to Exhibit 10.36 to the Registrants Annual Report on Form 10-K filed on March 31, 2006).
* 10.22 Employment Agreement Extension between the Company and Craig Tuttle dated July 12, 2008 (incorporated by reference to Registrant's Report on Form 8-K filed on July 16, 2008).
10.23 License Agreement between the Company 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).

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10.24 License Agreement between the Company and Power3 Medical Products, Inc. dated January 23, 2009 (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed on November 5, 2009).

+10.25 Asset Purchase Agreement, dated November 29, 2010, by and among PGxHealth, LLC, Clinical Data, Inc. and Transgenomic, Inc. (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).

+10.26 Amendment to Asset Purchase Agreement, dated December 29, 2010, by and among PGxHealth, LLC, Clinical Data, Inc. and Transgenomic, Inc. (incorporated by reference to Exhibit 2.2 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).

10.27 Series A Convertible Preferred Stock Purchase Agreement with Third Security dated December 29, 2010 (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).

10.28 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 on December 29, 2010 (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).

10.29 Registration Rights Agreement, dated December 29, 2010, by and among Transgenomic, Inc., 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).

10.30 Secured Promissory Note, issued December 29, 2010 by Transgenomic, Inc. in favor of PGxHealth, LLC (incorporated by reference to Exhibit 4.4 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).

10.31 Secured Promissory Note, issued December 29, 2010 by Transgenomic, Inc. in favor of PGxHealth, LLC (incorporated by reference to Exhibit 4.5 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).

10.32 Sublease Agreement, dated December 29, 2010, by and between Transgenomic, Inc. and Clinical Data, Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).

10.33 Noncompetition and Nonsolicitation Agreement, dated December 29, 2010, by and among PGxHealth, LLC, Clinical Data, Inc. and Transgenomic, Inc. (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).

10.34 Security Agreement, dated December 29, 2010, by and between PGxHealth, LLC and Transgenomic, Inc. (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on January 4, 2011).

10.35 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).

10.36 Agreement Regarding Preferred Stock dated November 8, 2011 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on November 14, 2011).

10.37 Convertible Promissory Note Purchase Agreement by and among the Company; Third Security Senior Staff 2008 LLC; Third Security Staff 2010 LLC; and Third Security Incentive 2010 LLC dated December 30, 2011 (incorporated by referenced to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 6, 2012).

10.38 Convertible Promissory Note by and between Transgenomic, Inc. and Third Security Senior Staff 2008

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LLC dated December 30, 2011(incorporated by referenced to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on January 6, 2012).

10.39 Convertible Promissory Note by and between Transgenomic, Inc. and Third Security Staff 2010 LLC dated December 30, 2011 (incorporated by referenced to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on January 6, 2012).

10.40 Convertible Promissory Note by and between Transgenomic, Inc. and Third Security Incentive 2010 LLC dated December 30, 2011(incorporated by referenced to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on January 6, 2012).

10.41 Securities Purchase Agreement entered into by and among the Company and the Investors dated February 2, 2012 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on February 7, 2012).

10.42 Form of Warrant issued by the Company to the Third Securities Entities on February 7, 2012(incorporated by referenced to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on February 7, 2012).

10.43 Form of Warrant issued by the Company 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).

10.44 Form of Registration Rights Agreement entered into by and among the Company, the Third Securities 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).

21 Subsidiaries of the Registrant.

23 Consent of Independent Registered Public Accounting Firm.

24 Powers of Attorney.

31 Certifications pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

** 32 Certifications 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 ***

* Denotes exhibit that constitutes a management contract, or compensatory plan or arrangement.

** This certification is 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 certification 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 Company specifically incorporates it by reference.

*** XBRL information is furnished and not filed for purposes of Sections 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Act of 1934, and is not subject to liability under those sections, is not part of any registration statement or prospectus to which it relates and is not incorporated or deemed to be incorporated by

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reference into any registration statement, prospectus or other document.

+ Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the SEC.

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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 on this 14th day of March 2012.

TRANSGENOMIC, INC.

By: /s/ CRAIG J. TUTTLE
Craig J. Tuttle,
President and Chief Executive Officer

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on this 14th day of March 2012.

Signature	Title
/s/ CRAIG J. TUTTLE Craig J. Tuttle	Director, President and Chief Executive Officer (Principal Executive Officer)
/s/ BRETT L. FREVERT Brett L. Frevert	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
/s/ RODNEY S. MARKIN* Rodney S. Markin	Director
/s/ ANTONIUS P. SCHUH* Antonius P. Schuh	Director
/s/ ROBERT M. PATZIG* Robert M. Patzig	Director
/s/ DOIT L. KOPPLER II* Doit L. Koppler II	Director

*By Craig J. Tuttle, as attorney-in-fact

/s/ CRAIG J. TUTTLE
Craig J. Tuttle
Attorney-in-fact for the individuals as indicated.