NANOGEN INC
Form 10-K
March 16, 2007
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# UNITED STATES

# SECURITIES AND EXCHANGE COMMISSION

**WASHINGTON, D.C. 20549**

# FORM 10-K

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

**For the fiscal year ended December 31, 2006**

**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 000-23541**

# NANOGEN, INC.

**(Exact name of Registrant as specified in its charter)**

| **Delaware** | **33-0489621** |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |
| **10398 Pacific Center Court, San Diego, CA** | **92121** |
| (Address of principal executive offices) | (Zip code) |

**Registrant s telephone number, including area code: (858) 410-4600**

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

| **Title of Class** | **Name of Exchange on Which Registered** |
|---|---|
| Common Stock $0.001 par value | NASDAQ Global Market, Inc. |
| Preferred Stock Purchase Rights | |

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

NONE

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

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

Large accelerated filer ¨ Accelerated filer x Non-accelerated filer ¨

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

YES ¨ NO x

The aggregate market value of the voting stock held by non-affiliates of the registrant based upon the closing sale price of the common stock on June 30, 2006 (the last day of the registrant s most recently completed second fiscal quarter), as reported on the Nasdaq Global Market was approximately $120,673,856. For purposes hereof, directors, executive officers and 10% or greater shareholders have been deemed affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares outstanding of the registrant s common stock was 72,465,248 as of February 28, 2007.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant s definitive proxy statement for its annual meeting of stockholders to be held in 2007 are incorporated by reference in Part III of this Form 10-K.

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**PART I**

**Forward Looking Statement**

*This Annual Report on Form 10-K and the information incorporated herein by reference contain forward-looking statements that involve a number of risks and uncertainties, as well as assumptions that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. Although our forward-looking statements reflect the good faith judgment of our management, these statements are based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties, and actual results and outcomes may differ materially from results and outcomes discussed in the forward-looking statements. We assume no obligation to update any forward-looking statement.*

*Forward-looking statements can be identified by the use of forward-looking words such as believes, expects, hopes, may, will, plan, intends, estimates, could, should, would, continue, seeks, pro forma or anticipates, or other similar words (including their use in the negative), or by discussions of future matters such as the development of new product, integration of acquisitions, possible changes in legislation and other statements that are not historical. In addition, to the extent statements in this report involve, without limitation, our expectations for growth, estimates of future revenue, expenses, profit, cash flows, balance sheet items or any other guidance for future periods, these statements are forward looking statements. These statements include but are not limited to statements under the captions Business, Risk Factors, and Management s Discussion and Analysis of Financial Condition and Results of Operations as well as other sections in this report. You should be aware that the occurrence of any of the events discussed under the heading Item 1A. Risk Factors and elsewhere in this Annual Report could substantially harm our business, results of operations and financial condition. If any of these events occurs, the trading price of our common stock could decline and you could lose all or a part of the value of your shares of our common stock.*

*The cautionary statements made in this Annual Report are intended to be applicable to all related forward-looking statements wherever they may appear in this Annual Report. We urge you not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report.*

**Item 1.** ***Business***
**Overview**

Our company is based on the vision of providing a higher quality of healthcare through advanced diagnostic products. Our business strategy is to assemble the companies, products and knowledge base to become a leading supplier of the technologies and products that will help drive a new era of personalized medicine. We were early to recognize that the adoption of personalized medicine is dependent on the advancement of diagnostic technologies. The commercialization of our products and technologies will help bridge the gap between early-stage scientific research and actual clinical practice. We are developing several product lines that are directly targeting specific markets within the advanced diagnostics field that have significant potential for revenue growth. We see recent successes and a growing capability in the clinical laboratories ability to perform accurate advanced diagnostic testing as a strong validation of our strategy. In addition, the U.S. Food and Drug Administration (the FDA ) has recently released guidance encouraging the generation of more pharmacogenomics data and molecular diagnostic testing during drug development and clinical trials, and before the use of medications. We believe these applications of advanced diagnostics will help build demand for our products and technologies.

In the last twelve months we have introduced several new products and believe they present significant opportunities for Nanogen to increase its revenues in 2007 and beyond. These new products represent important milestones for our company and the implementation of a sustainable, multi-product business model that over time will demonstrate improved financial performance. We released several Analyte Specific Reagents ( ASRs )

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including multiplexed reagents for the detection of the 23 most common genetic mutations related to Cystic Fibrosis and a series of real-time molecular reagents for infectious diseases.

Our 2006 annual revenues of $26.9 million more than doubled as compared to 2005. In 2006, we used $38.4 million of cash in operating activities and our multi-product commercialization strategy continues to require a significant investment. We believe we will continue to use cash and have net losses until revenues from our product offerings climb substantially. To continue to fund our commercialization strategy, in 2006 we raised $15.0 million from issuing equity securities to a corporate investor and $5.5 million from our equity line and also financed certain future royalty streams for an additional $20.0 million of cash. We believe that we will have the ability to sell a sufficient amount of securities to investors to continue our strategy of expanding our product pipelines by acquiring companies or assets and supporting our on-going internal product development.

As a part of our on-going long-term strategy, we actively and selectively seek to acquire companies with complementary products and strong intellectual property positions. We also specifically target companies with existing product lines that complement and add depth to our product portfolio that are or can be turned into cash flow positive entities when integrated into our company. In addition, we are developing an internal infrastructure that allows us to rapidly integrate acquired businesses or product lines into our existing sales, distribution and administrative functions. We have recently acquired or invested in the following companies:

On February 6, 2006, we acquired the rapid cardiac immunoassay point-of-care test business of Spectral Diagnostics Inc. ( Spectral ). This acquisition expanded our menu of products available for point-of-care customers. The acquired products include rapid tests for levels of CKMB, Myoglobin and Troponin, all of which are frequently used in cardiac care. In addition, we acquired an ability to manufacture these and other point-of-care products. The total purchase price of approximately $7.7 million was comprised of $4.8 million in cash and 975,193 shares of our common stock. The results of these acquired business operations were consolidated within our financial statements beginning February 6, 2006.

On May 1, 2006 we completed the acquisition of the diagnostics division of Amplimedical S.P.A. ( Amplimedical ), which is a manufacturer and distributor of molecular diagnostic products. Based in Italy, Amplimedical has been active in the European and other markets since the early 1990s with its molecular diagnostic reagents. Nanogen and Amplimedical have shared a business relationship for approximately five years, during which time Amplimedical has been a distributor of Nanogen s NanoChip® Molecular Biology Workstation and NanoChip® 400 instrument systems in Italy. We believe this acquisition will allow our molecular diagnostics business to further expand in Europe by providing additional resources and scale. Amplimedical s portfolio of real-time molecular diagnostic test kits are all CE marked for in vitro diagnostics. Amplimedical s diagnostic test kits also include multiplexed reagent kits, sold in Europe, such as the CE/IVD-marked set of reagents used to detect mutations in the GJB2 gene for the diagnosis of hereditary deafness and a research-use-only set of reagents to test for genetic causes of beta thalassemia, a type of inherited blood disorder that can cause anemia. The purchase price was approximately $9.9 million that was comprised of a $2.1 million payable secured by a letter of credit, a $6.9 million promissory note convertible into our common stock, and $0.9 million in transaction costs. On June 30, 2006 we paid the promissory note in full by issuing Amplimedical 2,886,935 shares of our common stock at a $2.63 per share conversion price and incurred no interest charges.

In a series of investments from July 2005 through June 2006, we invested approximately $3.0 million to purchase 29.7% of the outstanding stock of Jurilab LTD ( Jurilab ). In addition, we have the option to purchase the entire company at a not-to-exceed price through December 31, 2007. By investing in Jurilab, a development stage research and development company, we gained access to technologies related to certain gene markers. We believe that this investment strategy is an effective use of our cash because it provides us approximately two years to evaluate Jurilab s technology for potential commercialization and integration into our product lines before we commit to purchasing the entity.

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We are incorporated under the laws of the state of Delaware and our stock is listed on the Nasdaq Global Market under the symbol NGEN. Our corporate offices are located at 10398 Pacific Center Court, San Diego, California 92121. Our main telephone number is 858-410-4600.

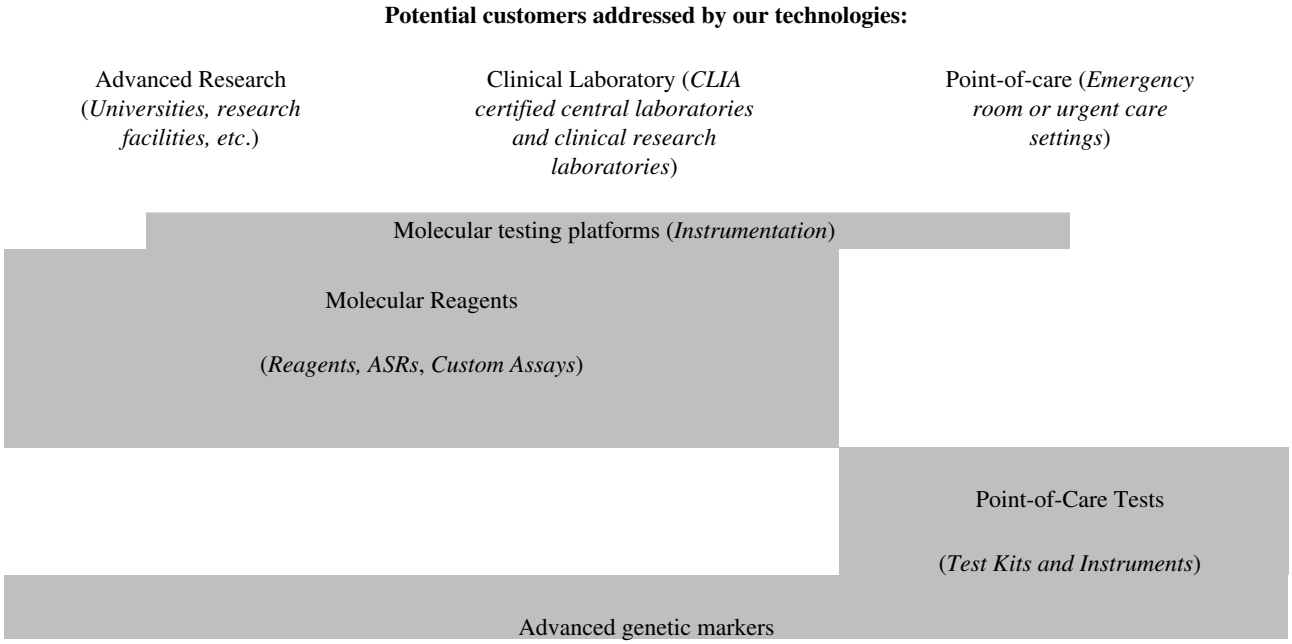
We make available through our internet website our code of business conduct and ethics, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to these reports as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission. Our internet address is www.nanogen.com. The information contained in, or that can be accessed through, our website is not part of this Annual Report.

**Technology and Customers**

***Technology***

Our diagnostic technologies focus on the identification of circulating proteins associated with specific diseases or on the nucleic acid sequences and gene variations associated with both genetic conditions and infectious diseases. We believe that our research will contribute to a new healthcare paradigm where disease is diagnosed and understood at the personal level. We believe that this will lead to shifting the focus of medicine to be increasingly proactive as well as being increasingly specific to the individual patient. Our tests will provide physicians with the information they require to tailor specific therapies to the individual patient. In support of this objective, we have developed a variety of diagnostic products for both the relatively simple and complex testing required to render disease specific molecular information accessible to researchers and clinicians.

Below illustrates how our platform technologies address our customer s requirements for advanced diagnostic products:




As illustrated above we have four categories of advanced diagnostic technologies: 1) molecular testing platforms 2) molecular reagents 3) point-of-care tests and 4) advanced genetic markers.

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*1) Molecular Testing Platforms (Instrumentation)*

For our customers that need to develop or perform more complex testing than is available with real-time instruments, we have developed the second generation NanoChip®400 system. This system is based on our proprietary lab on a chip detection technology that allows testing for multiple gene markers or mutations on one test site. Using our open system architecture, researchers and clinical laboratories can readily develop assays to test multiple genetic mutations for multiple patient samples and to perform them on an automated system. Our first generation system, the Molecular Biology Workstation has been discontinued and while we continue to support existing customers, the system is no longer being marketed or sold.

*2) Molecular Reagents (ROU Reagents, ASRs, Custom Assays)*

Molecular reagents encompass real-time PCR products and molecular reagents. The real-time products are platform independent and include custom designed products for the research market and ASRs which are sold to laboratories certified under the Clinical Laboratory Improvement Amendments of 1998 ( CLIA ) to develop, optimize and validate tests for clinical uses and CEIVDs, products that are registered for sale within the European Union. These products amplify disease specific nucleic acid sequences for analysis or identification in a simple test with rapid turn around. The US customers for this product line are primarily advanced research and clinical laboratories that test for single markers or mutations in genes. We also offer reagents for more complex mulitplex testing. These reagents provide laboratories the capability to test a patient sample against multiple targets. We currently offer multiplex reagents for genetic testing including respiratory viruses (RVA), blood clotting (Factor V/II), cystic fibrosis, and warfarin metabolism. The US customers for multiplex reagents are primarily research and clinical laboratories that test for infectious disease and genetic disease conditions. In Europe, the customers are generally government entities contracting for diagnostic tests through tenders.

*3) Point-of-Care (Test Kits)*

Our point-of-care tests consist of highly specific tests for identifying proteins that play a role in specific diseases. By identifying the level of specific proteins present in a patient sample, doctors can more accurately diagnose and monitor the progress of specific diseases. On February 6, 2006, with our acquisition of Spectral s point-of-care assets, we acquired several revenue generating rapid cardiac immunoassay tests that broadened our menu of products available for point-of-care customers. The acquired products include rapid tests for levels of CKMB, Myoglobin and Troponin I, all of which are frequently used in cardiac care. In addition, we acquired the ability to manufacture these and other point-of-care products. Also in 2006, we received a 510(k) clearance for a rapid diagnostic test for CHF using plasma samples. This product has not yet been introduced to the market. Our research and development efforts are focused on developing a test for congestive heart failure using whole blood samples. The customers for our point of care tests are generally emergency rooms and critical care units. Over time, we believe our technologies will help to move many of these tests from the clinical reference lab to the point-of-care settings such as the emergency room.

*4) Advanced Genetic Markers*

With our investment in Jurilab we gained access to a large database of advanced genetic markers created by studying the genetic patterns of a founder population in East Finland. This database provides insights to the correlation of genetic patterns as prognostic indicators of disease. We expect this collaboration to enhance the development and commercialization of our technology platforms by adding proprietary solutions to evaluate and diagnose disease. In May 2006, we entered into a collaboration agreement with Jurilab, where Jurilab would identify and validate new prognostic markers for Type II diabetes with certain milestone payments of up to 950,000 or approximately $1.2 million. As of December 31, 2006 we had paid Jurilab 550,000, or approximately $715,000, in milestone payments under this agreement.

***Customers***

The customers for our instrumentation, ASRs, reagents and custom assays are clinical research laboratories, high complexity CLIA certified laboratories and government-based healthcare facilities. In the United States, the

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Food and Drug Administration (the FDA) regulates most diagnostic tests and *in vitro* reagents marketed as test kits as medical devices. The FDA also considers ASRs to be medical devices. ASRs are exempt from pre-market approval requirements; however, the FDA restricts the sale of these products to those clinical laboratories that are certified under the Clinical Laboratory Improvement Amendments of 1988, known as CLIA. FDA regulations concerning ASRs are currently undergoing change and we expect to make adjustments to many, if not all, of our ASR products to conform to revised FDA regulations. All products sold in Europe require CE marking. Our customers in Europe are currently serviced through a distributor network in all countries except for Italy which is supported by Nanogen Advanced Diagnostics SrL.

Customers for our diagnostics technology and products therefore include:

*Clinical Laboratories (CLIA certified central laboratories and research laboratories)* These customers offer validated tests to aid physicians in the diagnosis of patients conditions. They may either develop reagents internally or may purchase ASRs manufactured under the Good Manufacturing Practices regulations and develop and validate their own tests. Ease of use and throughput is important to these customers.

*Government-based Healthcare Facilities* These customers are generally hospitals, laboratories or other healthcare facilities in Italy and other European or Middle East countries. These customers generally purchase products via government sponsored tenders which are competitively awarded multiyear contracts for specific diagnostic products.

*Emergency Room and Urgent Care Facilities* The customers of our point-of-care products are primarily in near patient settings in hospital laboratories and/or emergency rooms. To market and sell to these customers we are required to receive the approval of the FDA through a pre-market application. The point-of-care products we acquired from Spectral, in February 2006, have received FDA clearance and are CE marked for distribution in Europe. Our other point-of-care products currently in development, such as the congestive heart failure product, using whole blood samples, will require FDA clearance before we distribute the product in the United States and CE marking prior to distribution in Europe.

**Products**

We generate our product sales revenue with our advanced diagnostic product lines that we categorize as: 1) instrumentation, 2) reagents, and 3) test kits.

*Instrumentation*

We have developed the NanoChip® System to address the needs of the molecular diagnostics customer with an objective to become the preferred platform for development of applications for multiplex detection of genetic mutations or infectious disease pathogens by the clinical or clinical research laboratory. We believe our design is unique in the industry as it offers flexibility to the clinical laboratories to match their testing requirements. For example, our instrumentation systems allow the clinical laboratory customer to determine if it is more commercially effective for them to test for multiple genetic mutations on an individual set of genes, or a specific genetic mutation on multiple sets of individual genes or some combination of both. The NanoChip® 400 consists of a consumable cartridge containing a proprietary semiconductor microchip (the NanoChip® Electronic Microarray ), a fluidic and optical instrument, and embedded software that can be programmed by the end-user to control all aspects of microchip operations including processing, detection and reporting. The system has been designed so that once programmed, the end-user need only insert a consumable cartridge into the instrument and all subsequent steps may be handled automatically under computer control. The NanoChip 400 System provides multisample and multianalyte reporting capabilities when creating research or homebrew, clinical tests. This system uses our 400-site or 100-site NanoChip cartridge.

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In addition, we offer instrumentation products that are designed for use with certain of our point of care immunoassay tests. These include:

*LifeSign DXpress™ Reader* The LifeSign DXpress Reader is a multi-functional portable tabletop camera-based instrument that will be used to read results of in vitro immunodiagnostic assays. This system will be available for sale in connection with the launch of the quantitative CHF test.

i*Lynx Reader* The iLynx reader is a portable system used in conjunction with the tests acquired in connection with the Spectral asset purchase, including rapid qualitative tests for CKMB, Myoglobin and Troponin, in individual, tandem and in an all-in-one testing format used in cardiac care. This system is a qualitative reader with the ability to record useful information relating to the conduct of the tests.

*Reagents:*

We offer the following reagent products to customers for use in the development and conduct of molecular tests:

*NGEN™ Reagents* are reagents designed for use in detecting nucleic acid sequences for specific organisms or genetic mutations. These reagents can be used in connection with PCR amplified patient samples and hybridization detection utilizing fluorescently-labeled probes.

*MGB Alert™ Reagents* are clinical reagents used for detecting nucleic acid sequences for specific organisms or genetic mutations associated with diseases in a real-time PCR format.

*MGB Eclipse® Probe Systems* are reagents used in the development of diagnostics or other research applications in a real-time PCR format.

*Custom Assays* Our applications scientists develop products to meet our customers application needs through specific assay development services.

*Test Kits:*

Our point of care products and our molecular reagent products sold in Europe are sold as test kits. In the future, we plan to expand our test kit offerings to include kits for use by US-based customers on the NC400 system.

These test kits include:

Cardiac STATus® and Decision Point™ On February 6, 2006 we acquired several FDA cleared point-of-care products from Spectral that include rapid qualitative tests for CKMB, Myoglobin and Troponin, in individual, tandem and in an all-in-one testing format used in cardiac care.

*StatusFirst™ CHF NT-proBNP* is designed for use with the LifeSign DXpress Reader to provide quantitative determination of NT-proBNP levels in human plasma. We are developing a similar product that will utilize whole blood rather than plasma. This potential congestive heart failure test allows for efficient triaging of congestive heart failure patients, while providing accurate diagnostic test results. This product will be manufactured by Princeton BioMeditech ( PBM ).

*QPCR Alert* molecular diagnostic products that are sold in Europe under CE-IVD regulations for use in infectious disease testing or in testing for certain generic diseases.

**Our Growth Strategy**

We plan to grow our business through marketing of our existing products as well as the development and launch of new products. As part of our growth strategy, we will continue to invest in the internal development of new diagnostic products as well as the acquisition of complementary entities or product lines that address large and growing markets.

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*Molecular Testing Platform*

With the development of our second generation molecular testing platform, the NanoChip®400 system, we have focused on penetrating the high value, complex testing requirements of the molecular diagnostics market by creating an open platform that can help automate laboratory testing. This molecular testing platform was designed with an open architecture to facilitate development of molecular tests by our customers and collaborators, driving the growth in assay development far beyond our internal capacities. We believe the NanoChip®400 System could transform molecular diagnostics by delivering speed, efficiency and accuracy on a robust platform. We seek to establish our platform as the preferred system for the molecular diagnostics industry in order to reap the benefits of the higher margin profits on consumables. With each placement of the NanoChip® System, we create a potential source of on-going revenue through the sale of our consumables such as the NanoChip® Cartridges, ASRs and other products.

*Reagents and Custom Assays*

We believe we will increase our revenues by developing proprietary reagents that may be used on the NC400 as well as reagents that do not necessarily require our instrumentation. During 2006, we introduced multiplex reagents for use in CFTR testing and certain pharmacogenomic testing. We also introduced ten real time tests based on our proprietary MBG technology that may be used on multiple instrument platforms. These new products will enable customers to test for various infectious diseases. We believe that offering products for both the multiplexed and real-time markets supports our growth objective by offering customers a choice of technologies for testing. In addition, we will continue to supply our research reagents and our customized assay services in support of customer requests.

*Test Kits:*

FDA-cleared and CE marked test kits are an important component of our growth plans. Our acquisition of Amplimedical provides a significant portfolio of real-time IVD kits for use by customers in infectious disease and genetic testing. Our acquisition of the Cardiac STATus® and Decision Point products provides a basis for growth in point of care testing. Emergency rooms and urgent care units represent a significant market for rapid point-of-care testing for cardiovascular conditions. We are in development of a CHF test that once fully developed and cleared/approved by the FDA, European and Canadian regulatory authorities will add to our point-of-care product line. We also plan to develop FDA cleared and CE marked kits for multiplex molecular assays that can be used on the NC400. These products will enable us to expand our addressable market beyond the complex CLIA certified laboratories that can use ASRs in testing applications.

**Products and Applications in Research and Development**

Below is a brief description of some of our future products and applications currently in research and development by us or with our collaborators.

*Instrumentation:*

In 2007, we are pursuing a two track approach to the development of our instrumentation platforms. The first track is focused on developing the clinical user interface of our molecular testing platform technology to support 510(k) applications for the detection of gene mutations. The second track is continued investment in the open system version of the NanoChip400® system that allows our customers to tailor its use to their specific requirements. Also, we continue to work to miniaturize our electronic array technology with the support of several government and privately funded grants.

*Identification of genetic and infectious disease*

We are also working to increase our menu of advanced molecular reagents. These reagents consist of our proprietary real time PCR technologies and are sold as ASRs to CLIA certified laboratories for their internal

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development of highly sensitive assays. During 2006 we introduced ten advanced molecular reagents and we will continue to introduce additional products in the coming years to broaden our suite of real time tests We expect to expand both infectious disease and genetic disease reagents. In conjunction with our investment in Jurilab, we are in the early stages of developing a product to screen patients for a genetic predisposition to develop Type II Diabetes.

*Point-of-care*

We are currently developing a point-of-care test for CHF, for use with human whole blood samples, which will give a quantitative reading of NT-proBNP, a marker for CHF, a chronic disease that affects millions of patients each year. The *Status*First™ product will provide a result in approximately 15 minutes. Working with partners, we expect to add a test for Drugs of Abuse (DOA) and will continue to develop and add products to our point of care cardiac and urgent care menu.

We also are actively engaged, with our partner HX Diagnostics, in the development of a pandemic diagnostic product under a contract we received from the CDC.

*Pharmacogenomics*

Pharmacogenomics is the science of individualizing therapy based on genetic differences among patients. Certain genes have been shown to be required for the breakdown and elimination of drugs in the body (pharmacokinetics). Individuals metabolize drugs differently based on the individuals genetic make up. Certain variations in these genes can result in an inability to process specific categories of drugs, leading to a buildup of toxic chemicals in the body. Other genetic changes can result in extremely rapid breakdown of a drug, limiting the drug s effectiveness. By determining a patient s genetic profile prior to prescribing a drug, a physician can reduce the potential for serious or fatal side effects. We believe that the ability of our technology to screen simultaneously for various differences in a patient s DNA has wide applicability to pharmacogenomics. We are currently developing pharmacogenomic products to help assess the ability of patients to metabolize warfarin and certain other drugs.

**Research and Development**

As of December 31, 2006, we had 79 full-time employees in research and development. Our research and development expenses were $26 million in 2006, $22 million in 2005 and $18 million in 2004. These research and development expenses have been directed toward developing products in areas where there is a significant opportunity for a return on investment. Most of our research and development has been conducted at our facilities in San Diego California; Bothell Washington; Toronto, Canada; or Turin, Italy or in collaboration with various partners.

**Sales and Marketing**

Our sales representatives are able to recommend the appropriate business solution to meet the needs of our customers by presenting multiple technology and instrumentation options. Sales representatives are trained to find new market opportunities, provide diagnostic solutions to address unmet customer needs, and to provide comprehensive after-sale product support. In addition, our field technical support group provides thorough training and ongoing technical support for our products.

We sell our NC400, multiplex reagents, and custom assays in the United States through our own direct sales force. We sell our real-time ASRs and our point of care kits in the US through distributors. On August 9, 2006, we entered into an exclusive distribution agreement with Fisher Scientific to sell our real-time products in the US market. With our acquisition of Spectral Diagnostics, we assumed a relationship with Cardinal Healthcare to distribute our Cardiac STATus, Decision Point, and i-Lynx point-of-care products in the U.S.

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As of December 31, 2006, our staff included approximately 51 sales, marketing and technical support representatives. These representatives principally focus on complex CLIA certified laboratories including clinical research laboratories, reference laboratories and public health laboratories. We continually educate our sales representatives on the technical, clinical and economic merits of our products.

All sales to customers outside the United States are made through distributors or agents. We currently have distributors addressing the major markets in Europe and Middle East. In the future, we plan to add additional distributors to address India and potentially the major Asian markets. To support our commercial efforts in Europe, in 2006 we acquired the assets of Amplimedical S.r.L., a limited liability company, in Italy. This wholly-owned subsidiary operates as our primary European sales, marketing and technical support office. We closed our previous European sales and support office in The Netherlands following the acquisition of Amplimedical.

We have built our own internal services organization. This field service organization provides initial installation of the NanoChip® system, on-going technical support and warranty and maintenance work as needed.

**Collaborations and Strategic Arrangements**

We intend to continue entering into collaborations to expand applications of our technology platforms and to accelerate the commercialization of products. We will pursue additional collaborations in various forms, including research and development agreements, licensing agreements and joint ventures. These collaborations permit integration of the technologies and resources of our partners with our technologies, while allowing us to pursue diagnostics and other opportunities outside the scope of these collaborations.

We are currently involved in the following corporate collaborations:

*Jurilab*

In a series of investments from July 2005 through June 2006, we invested approximately $3.0 million to purchase 29.7% of the outstanding stock in Jurilab LTD ( Jurilab ), a Finnish company that has assembled a large database of genetic markers by studying the genetic patterns of a founder population in East Finland. This unique database was constructed over the last twenty years providing novel insights to the correlation of genetic patterns as a prognosticator of disease. Our investment in Jurilab is an example of our desire to add proprietary content on top of our advanced diagnostic tools and thereby create unique solutions to evaluate and diagnose disease. The investment agreement provides us with an option to purchase the entire company at a not-to-exceed price through December 31, 2007.

In May 2006, we entered into a collaboration agreement with Jurilab, where Jurilab would identify and validate new prognostic markers for Type II diabetes with certain milestone payments of up to approximately $1.2 million. As of December 31, 2006, we paid Jurilab approximately $715,000 for the completion of certain milestones under this agreement.

*Applied Biosystems*

Our license agreement with Applied Biosystems Inc. (Applied Biosystems), with the underlying patents expiring at various dates between 2010 and 2015, provided us approximately $6 million in revenues in 2006. In January 2006, we renegotiated our contract with Applied Biosystems to include additional rights to certain intellectual property and a modification to our manufacturing and know-how transfer agreement. Under the revised agreement, we were guaranteed minimum quarterly royalties through December 31, 2006; however, actual royalties exceeded the minimum guarantees. There are no longer any guaranteed minimums.

Although we expect this relationship to continue into the foreseeable future this contract can be terminated by Applied Biosystems with a 180-day notice.

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In September 2006, we entered into an agreement to assign certain rights associated with our Applied Biosystems royalty agreement from the period of July 2006 through December 2011 to Drug Royalty Trust ( DRT ) for an upfront payment of $20.0 million. Under the agreement, we have guaranteed minimum royalty payments from Applied Biosystems to DRT. If the royalty payments fall below certain minimums in a given fiscal year, we are required to pay cash to DRT for the difference between the actual royalty payments from Applied Biosystems and the minimums. In addition, if royalty payments from Applied Biosystems are above certain thresholds for a given calendar year we will receive, in cash, a certain percentage of the amount above the threshold.

*FasTraQ Inc.*

In June 2005, we signed a letter of agreement with FasTraQ, Inc. ( FasTraQ ) for the development of a certain future product. Our Chief Executive Officer and Chairman of the Board, Mr. Birndorf, is a director and an investor in FasTraQ and our newest director, Dr. Heiner Dreismann, became CEO of FasTraQ in 2006. In October and December 2005 we amended this letter of agreement. As a result of this agreement and related amendments we made an initial non-refundable payment of $500,000 in 2005 to begin the initial development of this product. As of December 31, 2005, we expensed the initial $500,000. In February 2006, we converted this letter of agreement into two executed contracts, a Development and License Agreement and a Collaboration Agreement. In February 2006, we committed to provide FasTraQ up to an additional $500,000 in funding based on certain milestones, of which $200,000 was paid in 2006 and expensed into research and development.

*Princeton BioMeditech ( PBM )*

Through our SynX acquisition, we were a party to a 2001 development and manufacturing agreement between SynX and PBM to jointly develop and market various point-of-care tests for certain biomarkers and protein targets. As of January 2006, we terminated all of our previous agreements with PBM and replaced them with renegotiated contracts. These new agreements include a manufacturing and distribution agreement and a development agreement. There were no payments between us and PBM associated with entering into these agreements and there were no minimum purchase requirements between the parties.

We agreed to continue the joint development of a point-of-care product for diagnosis of CHF that incorporates PBM s proprietary technology, our proprietary reagents and an exclusive license between us and Roche Diagnostics GmbH. PBM is responsible for the development of a reasonably priced instrument and for manufacturing of a CHF test that uses our reagents to determine the amount of target NT-proBNP present in a patient. We will fund a certain percentage of the development cost of the instrument, up to an agreed upon maximum amount. In addition, we are required to develop and manufacture the reagents used in the instrument and supply them to PBM. We are also responsible to conduct the testing of our reagents required to obtain regulatory approval to market them. The parties will share revenues associated with this point-of-care instrument and test with the majority of revenues being allocated to the party responsible for selling, marketing and distributing the instrument and test within a specific geographic territory. Each party will be responsible for its own manufacturing, sales and marketing expenses and both parties are required to provide each other a forecast of expected demand for each others product (reagents or instruments).

We provided PBM with an option to purchase or to receive a nonexclusive license for certain biological markers for the incorporation into a future point-of-care instrument related to congestive heart failure, stroke or traumatic brain injury. We have agreed to negotiate in good faith commercially reasonable terms for such a license or supply arrangement. However, if we are unable to agree upon such terms PBM will pay Nanogen a certain royalty for the use of these markers.

*Pharmacogenetics Diagnostic Laboratory*

Beginning in July 2005, we have made a series of investments Pharmacogenetics Diagnostic Laboratory, LLC ( PGx ) a development stage research and development company. These investments totaled $500,000 as

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of December 31, 2006. We believe our ownership interest in PGx will provide us with access to technology related to pharmacogenetics.

*Fisher Scientific*

On August 3, 2006, we entered into research and development collaboration arrangements with Fisher Scientific International Inc., ( Fisher Scientific ) and Athena Diagnostic, a wholly-owned subsidiary of Fisher Scientific. In March 2006, we entered into an agreement to provide certain research services for the Abgene subsidiary of Fisher Scientific during 2007. We agreed to share certain technology and patent rights related to the development, manufacture and marketing of new molecular diagnostic products. Under these arrangements, Fisher Scientific has the option to provide up to $10 million in 2007 and 2008 for the research and development of infectious disease and molecular diagnostic tests that will be mutually agreed upon. These arrangements are included in non-binding general agreements, thus the obligation of the parties are subject to further negotiation and final terms of definitive collaboration agreements. Additional projects have yet to be identified and committed by both parties.

*HX Diagnostics*

We have been working with HX Diagnostics ( HX ) under an agreement signed in August 2006 to develop a point of care test for the detection of pandemic flu or other viruses. HX provided $1.3 million of funding for this project during 2006. Under the terms of the agreement, HX will have exclusive commercialization rights for a completed product to detect a pandemic flu while we will retain the distribution rights to detect other flu viruses. Our collaboration on this program formed the basis for the contract awarded to Nanogen by the Center for Disease Control ( CDC ) in December 2006. The CDC may provide funding for the next phase of this project and potentially beyond.

*Hitachi, Ltd., Nissei Sangyo Co. Ltd. and Hitachi Instruments Service Co. Ltd. Research Agreement*

In 2000, we executed a research agreement with Hitachi, Ltd., Nissei Sangyo Co. Ltd. and Hitachi Instruments Service Co. Ltd. of Japan (collectively, Hitachi ) to develop, manufacture and distribute potential products based on the parties proprietary technologies. Pursuant to the terms of the agreement, Hitachi and we each may contribute, toward our research and development efforts, cash over the period of the agreement. We are liable to repay to Hitachi 50% of all funding provided by Hitachi over an indefinite period of time. Repayment amounts are determined as a percentage of our gross NanoChip® Cartridge sales until the liability is paid in full.

In accordance with Statements of Financial Accounting Standards ( SFAS ) No. 68 *Research and Development Arrangements*, we recorded sponsored research revenue under this arrangement as expenses were incurred, in amounts not exceeding scheduled payments under the agreement. Sponsored research revenue recognized under this agreement totaled $500,000 for the year ended December 31, 2004. We had no revenue under this agreement in the years ended December 31, 2005 or 2006. Upon receipt of the funds, we recorded a long-term liability for 50% of the amount in Other long-term liabilities in the accompanying balance sheet, which accumulated to approximately $4.9 million as of December 31, 2006. . We have classified the entire balance of this liability as long-term due to the immaterial amount of current payments due under this obligation in 2007, as such payments are calculated under the agreement as percentage of gross NanoChip® Cartridge revenue.

In 2003, in accordance with the terms of the agreement, Hitachi exercised its right to terminate the collaborative research agreement. The termination of this agreement did not accelerate the repayment due Hitachi for the 50% of the funding. Based on discussions, we determined to focus our efforts on the development and manufacture of the NanoChip® 400 instrument. Hitachi is responsible for world-wide manufacturing of the NanoChip® system. We are responsible for development of assays and for marketing and sales.

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*Government Grants*

*National Institutes of Health (NIH)*

The National Institute of Allergy and Infectious Diseases for the NIH, provides funding for several grants. In July 2002, we were awarded a grant which focused on the development of a compact centrifugal micro fluidics based biological warfare agent (BWA) analyzer. In March of 2005 we began phase two of this grant and were awarded an additional $529,000 over a two year period. In May and September 2003, Nanogen was awarded a second and third grant. The second grant is for the development of a dieletrophorectic (DEP) separator for cell/pathogen separation. The third grant is aimed at developing an on-chip real-time DNA amplification for BWA detection. The total awards of these grants totaled approximately $1.5 million over a 4-year period. In July 2005, we were awarded a fourth grant for the diagnosis of Sepsis and community acquired pneumonia for a total of $2.5 million over five years. In September 2006, the Medical College of Wisconsin was awarded a five year $8.1 million grant, in which we are a subcontractor, to develop a rapid point-of-care diagnostic for bioterrorism A and pandemic influenza. Our expected share is $3.7 million as a subcontractor. Revenue is recognized under these grants as expenses are incurred and totaled $998,000, $650,000, $415,000 and $188,000 for the years ended December 31, 2006, 2005, 2004 and 2003, respectively.

*Bill and Melinda Gates Foundation Grant*

In July 2005, the University of Washington was awarded a $15.4 million grant from the Bill and Melinda Gates Foundation as lead partner of a consortium, which includes us, to develop a prototype portable device that healthcare workers could pack into remote regions to quickly and easily make life-saving diagnoses on such diseases as malaria. Our share over 5 years is expected to be $3.6 million. This consortium will concentrate on filling the need for an affordable portable device to do point-of-care testing and provide rapid results. Revenue under this grant is recognized as expenses are incurred and totaled $480,000 and $429,000 in the years ended December 31, 2006 and 2005, respectively.

*Center for Disease Control*

On December 4, 2006, we were one of four companies awarded a contract from the U.S. Centers for Disease Control and Prevention ( CDC ) to develop a unique multi-analyte point-of-care diagnostic assay for influenza in support of the US Government s efforts to strengthen its readiness for a potential influenza pandemic. The goal of the project is to employ technology in a low cost, high sensitivity immunoassay that simultaneously detects Influenza Type A, Type B, seasonal flu and avian flu in a simple to use assay format. This development program is related to our partnership with HX Diagnostics, Inc. which will have the right to commercialize the product. The current award of $4.5 million funds the first two phases of a five-phase development project and, if all five phases are funded by the CDC, can total approximately $12.5 million over the next two to three years.

**Patents and Proprietary Technology Rights**

We consider the protection of our proprietary technologies and products to be an important element in the success of our business strategy. In 2006, we were granted 26 U.S. patents bringing our current total to 137 issued U.S. patents and numerous foreign patents expiring at varying dates. In addition, we have a number of pending patent applications filed in the U.S. and abroad.

Patent applications may not be issued. Issued patents may not be found valid if challenged. In addition, intellectual property rights licensed by us may not be successfully integrated into commercial products. Others may independently develop similar technologies or duplicate any technology developed by us. Because of the extensive time required for development, testing, and regulatory review of a potential product, it is possible that, before new products can be commercialized, our related patents may expire or remain in existence for only a short period following commercialization, thus reducing any advantage of the patent, which could adversely affect our ability to protect future product development and, consequently, our business, financial condition and results of operations.

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We seek to protect our inventions through filing U.S. patents and foreign counterpart applications in selected other countries. Because patent applications in the U.S. are maintained in secrecy for at least eighteen months after the applications are filed and since publication of discoveries in the scientific or patent literature often lags behind actual discoveries, we cannot be certain that we were the first to make the inventions covered by each of our issued or pending patent applications or that we were the first to file for protection of inventions set forth in such patent applications. Our planned or potential products may be covered by third-party patents or other intellectual property rights, in which case continued development and marketing of the products would require a license. Required licenses may not be available to us on commercially acceptable terms, if at all. If we do not obtain these licenses, we could encounter delays in product introductions while we attempt to design around the patents, or could find that the development, manufacture or sale of products requiring these licenses is foreclosed.

We may rely on trade secrets to protect our technology. Trade secrets are difficult to protect. We seek to protect our proprietary technology and processes by confidentiality agreements with our employees and certain consultants and contractors. These agreements may be breached, we may not have adequate remedies for any breach and our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our employees or our consultants or contractors use intellectual property owned by others in their work for us, disputes may also arise as to the rights in related or resulting know-how and inventions.

**Competition**

The medical diagnostics and biotechnology industries are subject to intense competition. Our competitors in the United States and abroad are numerous and include, among others, diagnostic, health care, pharmaceutical and biotechnology companies.

Many of our competitors have substantially greater financial, technical, research and other resources and larger, more established marketing, sales, distribution and service organizations than we do. Moreover, many of our competitors offer broader product lines and have greater brand recognition than we do, and offer price discounts as a competitive tactic. In addition, there can be no assurance that competitors, many of which have made substantial investments in competing technologies, will not prevent, limit or interfere with our ability to make, use or sell our products either in the United States or in international markets.

In the markets for clinical molecular diagnostic products, a number of companies including Roche, ABI, Celera Diagnostics, Luminex and Third Wave compete with us for product sales, primarily on the basis of technology, quality, reputation, accuracy, ease of use, price, reliability, the timing of new product introductions and product line offerings. In the point of care market, there are numerous competitors that offer rapid cardiac tests. In particular, Biosite currently has FDA-cleared tests and a large installed base of customers for cardiac rapid tests including CHF. In markets outside of the United States, other factors, including local distribution systems, complex regulatory environments and differing medical philosophies and product preferences, influence competition as well.

**Government Regulation**

Our micro-array instrumentation and ASR products are to be used only for research purposes or by CLIA-certified laboratories when developing and validating their own diagnostic tests. When we begin to distribute and manufacture products for non-CLIA laboratories and point-of-care customers, we are subject to additional FDA requirements such as pre-market applications.

In March 2006, we received FDA clearance to begin marketing our NT-proBNP congestive heart failure product for use with human plasma.

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In the third quarter of 2005, we received an untitled letter from the Office of In Vitro Diagnostic Devise Evaluation and Safety (OIVD), a division of the FDA. The letter described the OIVD s concerns that our microarray NanoChip® systems and certain related ASRs might be construed as a medical device that requires a premarket notification/application. During the first quarter of 2006 we met with the FDA and made certain changes in our marketing materials and sales approach. In September 2006, the FDA published Draft Guidance for Industry and FDA Staff: Commercially Distributed Analyte Specific Reagents (ASRs): Frequently Asked Questions setting forth the FDA s interpretation of the regulations governing the sale of ASR products. Subsequently, we received a second letter from the OIVD in which the FDA asserted that our microarray and multiplexed reagents require FDA pre-market review. In November 2006, we met with the FDA to discuss the second letter. As a result of these communications, we relabeled the NC400 for Research Use Only and have committed to the FDA to submit the NC400 and our assays to the agency for pre-market approval beginning in 2007. We believe that our real time ASR products are not subject to FDA pre-market review. If there is an unfavorable decision or action by the FDA in these matters, it could delay or prevent sales of our NanoChip®400 to clinical laboratories in the United States and could adversely impact sales of our ASRs to clinical laboratories in the United States.

There can be no assurance that new legislation will not impose additional costs or lengthen review times for our products.

Additionally, should we develop food pathogen products, they will be subject to the regulations of various domestic and foreign government agencies which regulate food safety and food adulteration, including the U.S. Department of Agriculture.

**Manufacturing and Raw Materials**

In July 2000, we executed a ten-year agreement with Hitachi, Ltd., Nissei Sangyo Co. Ltd. and Hitachi Instruments Service Co. Ltd. of Japan to develop, manufacture and distribute products based on the parties proprietary technologies. In June 2003, we entered into another manufacturing agreement with Hitachi for the manufacture of our second generation clinical instrument. Hitachi has exclusive manufacturing rights and distribution rights in Japan. We have retained exclusive rights pursuant to each agreement to manufacture the NanoChip® Cartridges.

Pursuant to the manufacturing agreements each party is obligated to provide the other with certain notice periods if such party determines to curtail or terminate the manufacturing relationship. Nevertheless, while alternative manufacturers of our NanoChip400® exist, a lengthy process would be required to negotiate and begin work under a manufacturing agreement with a new manufacturer which could disrupt our manufacturing process and harm revenues from NanoChip® product sales.

We purchase raw materials essential to our business in the ordinary course of business from numerous suppliers. Substantially all the raw materials used for our commercial manufacturing of oligonucleotides, assay systems and other reagent products are available from multiple sources; however, other raw materials for supply contract and OEM manufacturing are proprietary products of other companies. Raw materials may be rejected if they do not meet manufacturing specifications, are contaminated and/or have other failures. A material shortage, contamination, or failure could adversely impact the commercial manufacturing of our products and related revenues.

**Quality Systems**

We have implemented modern quality systems and concepts throughout the organization. Our regulatory department supervises our quality systems and is responsible for assuring compliance with all applicable regulations, standards and internal policies. Our senior management team is actively involved in setting quality policies and managing internal regulatory and monitoring external quality performance.

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Our regulatory, quality and government affairs department has successfully led us through multiple quality and compliance audits by regulatory bodies and customers.

**Geographic Area Financial Information**

For financial information concerning the geographic areas in which we operate, see Note 14, Geographic Sales and Significant Customers to the consolidated Financial Statements.

**Employees**

As of December 31, 2006, we had 288 employees of whom 39 hold Ph.D. degrees and 22 hold other advanced degrees. Approximately 79 are involved in research and development, 101 in operations, manufacturing and quality assurance, 64 in sales and marketing, and 44 in finance, legal and other administrative functions. Our success will depend in large part upon our ability to attract and retain employees. We face competition in this regard from other companies, research and academic institutions, government entities and other organizations. None of our employees are covered by a collective bargaining agreement except for our Italian employees that operate through government mandated workers councils.

**Item 1A.** ***Risk Factors***

*We have a history of net losses. We expect to continue to incur net losses and we may not achieve or maintain profitability.*

Since our inception, we have incurred cumulative net losses which, as of December 31, 2006, total approximately $360.7 million. Moreover, our negative cash flow and losses from operations will continue for the foreseeable future. We may never generate sufficient product revenue to become profitable. We also expect to have quarter-to-quarter fluctuations in revenues, expenses and losses, which could be significant. The amount and timing of product revenue recognition and cash flow may depend on whether potential customers for the molecular testing platform choose to enter into sales, reagent rentals, cost-per-test or development site transactions. We believe our future operating results may be subject to quarterly fluctuations due to a variety of factors, including, but not limited to, goodwill or other impairment charges, non-cash stock option expenses, market acceptance of the second generation NanoChip® 400 System, acquisitions, and potential other products under development, including the CHF product and diagnostics related to infectious disease, the type of acquisition program our potential customers may choose, whether and when new products are successfully developed and introduced by us or our competitors, and the achievement of milestones under our collaborative agreements various government and private agencies. The recognition of revenue under contracts, grants and sponsored research agreements will be subject to significant fluctuations in both timing and amount and therefore our results of operations for any period may not be comparable to the results of operations for any other period.

To develop and sell our products successfully, we may need to increase our spending levels in research and development, as well as in selling, marketing and administration. We may have to incur these increased spending levels before knowing whether our products can be sold successfully.

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*We will need additional capital in the future. If additional capital is not available, we may have to curtail or cease operations.*

We will need to raise more money to continue the research and development necessary to further develop our current products to bring our products to market and to further our manufacturing and marketing capabilities. We may seek additional funds through public and private securities offerings, arrangements with corporate partners, borrowings under lease lines of credit or other sources. If we can not raise more money, we will have to reduce our capital expenditures, scale back our development of new products, significant reduce our workforce and seek to license to others products or technologies that we otherwise would seek to commercialize ourselves. The amount of money we will need will depend on many factors, including among others:

- the amount of revenue we are able to generate;
- the progress of our research and development programs;
- the commercial arrangements we may establish;
- the time and costs involved in:
  - scaling up our manufacturing capabilities;
  - meeting regulatory requirements, including meeting necessary Quality System Regulations ( QSRs ) and obtaining necessary domestic and international regulatory clearances or approvals;
  - acquisition(s) or investment(s) into other businesses;
  - filing, prosecuting, defending and enforcing patent claims and litigation; and
  - the scope and results of our future clinical trials, if any.

Additional capital may not be available on terms acceptable to us, or at all. Any additional equity financing will be dilutive to stockholders, and debt financing, if available, may include restrictive covenants and require significant collateral.

*If our products are not successfully developed or commercialized, we could be forced to curtail or cease operations.*

We are at an early stage of development. As of December 31, 2006 we had only a limited product offering that includes real-time PCR products (both custom and proprietary tests), molecular testing platforms (NanoChip® system), ASRs and the point-of-care diagnostic tests for myocardial infarction and drugs of abuse. Our congestive heart failure point of care test remains in development. Our second generation molecular testing platform, the NanoChip® 400, began shipping in October 2005. Many of our ASRs are under development. Our molecular testing platforms and ASR products may not be successfully developed or commercialized on a timely basis, or at all. If we are unable, for technological or other reasons, to complete the development, introduction or scale-up of manufacturing of our new products, or if our products do not achieve a significant level of market acceptance, we would be forced to curtail or cease operations.

We are also party to transactions known as reagent rentals and cost-per-test agreements. Under these types of transactions, we place molecular testing systems at a customer site with no upfront cost to the customer. The value of the instrument is typically recaptured through a contracted stream of future reagent sales, sold at a premium to cover the cost of the system. These reagent rentals and cost-per-test agreements result in us

investing current capital in the cost of an instrument, while revenues recognized and cash received under these agreements are over the life of the contract, as reagents are shipped to the customer.

*Lack of market acceptance of our products and technology would harm us.*

Our success will depend upon our ability to continue to overcome significant technological challenges and successfully introduce our products into the marketplace. A number of applications envisioned by us may require

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significant enhancements to our basic technology platform. There can be no assurance that we can successfully develop such enhancements.

Although we have developed a number of products as discussed above, we may not be able to further develop these products or to develop other commercially viable products. Even if we develop a product, it may not be accepted in the marketplace. If we are unable to achieve market acceptance, we will not be able to generate sufficient product revenue to become profitable. We may also be forced to carry greater inventories of our products for longer periods than we may have anticipated. If we are unable to sell the inventory of our products in a timely fashion and at anticipated price levels, we may not become profitable. In addition, we may have to take accounting charges and reduce the value of our product inventory to its net realizable value. If actual future demand or market conditions are less favorable than those currently projected by us, additional inventory write-downs may be required.

Market acceptance will depend on many factors, including our ability to:

- convince prospective strategic partners and customers that our technology is an attractive alternative to other technologies;
- manufacture products in sufficient quantities with acceptable quality and at an acceptable cost; and
- sell, place and service sufficient quantities of our products.

In addition, our technology platform could be harmed by limited funding available for product and technology acquisitions by our customers, internal obstacles to customer approvals of purchases of our products and market conditions in general.

Performance issues with our products may also harm market acceptance of our products and reduce our revenues. During the year ended December 31, 2004, certain clinical laboratories experienced performance issues with our cystic fibrosis analyte specific reagent, CFTR ASR, which negatively impacted our revenue. A new CFTR ASR was introduced in March 2006. We may encounter similar performance product issues that we may not be able to address to the satisfaction of our customers and they may decide to adopt alternative products.

*Commercialization of some of our potential products depends on collaborations with others. If our collaborators are not successful or if we are unable to find collaborators in the future, we may not be able to develop these products.*

Our strategy for the research, development and commercialization of some of our products requires us to enter into contractual arrangements with corporate collaborators, licensors, licensees and others. Our success depends in part upon the performance by these collaboration partners and potential collaboration partners of their responsibilities under these arrangements. Some collaborators may not perform their obligations as we expect, and we may not derive any revenue or other benefits from these arrangements. We do not know whether our collaborations will successfully develop and market any products under our respective agreements. Moreover, some of our collaborators are also researching competing technologies targeted by our collaborative programs.

Our molecular testing systems platform, the second-generation NanoChip® 400, is manufactured by Hitachi. As such our success in the molecular testing based diagnostics market is largely dependent upon Hitachi s ability to perform under our manufacturing agreement.

Through SynX we were a party to a 2001 development and manufacturing agreement between SynX and Princeton BioMeditech Corporation ( PBM ) to jointly develop and market various point-of-care tests for certain biomarkers and protein targets. As of January 2006, we terminated all of our previous agreements with PBM and superseded them with renegotiated contracts. These contracts include a manufacturing and distribution agreement and a development agreement. We agreed to continue the joint development of a point-of-care instrument that

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incorporates PBM s proprietary technology, our proprietary reagents and an exclusive license between us and Roche Diagnostics GmbH. PBM is responsible for the development of an instrument that uses our reagents to determine the amount of target NT-proBNP present in a patient. We are required to develop and manufacture the reagents used in the instrument and supply them to PBM who manufacture the test device. We also have to conduct the testing of our reagents required to obtain regulatory approval to market and sell them. As a result, our success in the point-of-care market is dependent in part upon PBM s ability to perform under these agreements.

We may be unsuccessful in entering into other collaborative arrangements to develop and commercialize our products. In addition, disputes may arise over ownership rights to intellectual property, know-how or technologies developed with our collaborators.

*The transition to new products subjects us to risks and uncertainties including undetected defects or unexpected technical or operational problems which could adversely affect our business.*

In October 2005, we announced the release of our second-generation instrument system, the NanoChip® 400. Risks inherent in the transition to our second-generation system and other new products we may release in the future include the following:

- potential delays in initial shipments of new products;
- undetected defects or unexpected technical or operational problems with the new products;
- the possibility that new products may erode demand for our current products, including those under reagent rental agreements;
- a decline in sales of our molecular testing instrumentation and as a result a build-up of an excessive, obsolete supply of inventory;
- potential delays in customer purchases in anticipation of new product releases or a decision by customers to evaluate new products for longer periods of time before making a purchase;
- uncertainties in product pricing and market acceptance; and
- additional costs related to providing customer support and service for both first generation and second generation systems.

The occurrence of any one of the foregoing factors could negatively impact our financial results, delay market acceptance of our products, divert our development resources, or otherwise have an adverse effect on our business.

*The Fisher Scientific and CDC collaborations and awards may not continue beyond the currently funded projects.*

We have entered into two contracts to provide research services to various units of Fisher Scientific under a collaboration announcement of August 2006 that anticipated up to $5.0 million of funding in each of 2007 and 2008. No projects have been identified for either 2007 or 2008 at this time under this collaboration announcement. There is no guarantee that our collaboration with Fisher Scientific will result in the anticipated funding. Fisher Scientific was acquired by Thermo Electron in November 2006.

We have received a $4.5 million contract from the CDC to cover the first two phases of a possible five phase development program totaling up to $12.5 million. Future awards will be given at the discretion of the CDC. In making further contract awards, the CDC may consider the achievement of certain milestones in the current contract but there can be no assurance that we will successfully attain them. The exact reimbursement rates provided by the CDC are also subject to our performance of the contract under allowed rates of reimbursement and the ratio of internal versus outside supplier expenses. The CDC could modify our rates of reimbursement based on our actual performance.

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*If our acquisitions are unsuccessful, our business may be harmed.*

As part of our business strategy, we have acquired companies, technologies and product lines to complement our internally developed products. We expect that acquisitions will remain a part of our growth strategy going forward. Acquisitions involve numerous risks, including the following:

- The possibility that we will pay more than the value we derive from the acquisition, which could result in future non-cash impairment charges such as the $59 million non-cash goodwill impairment charge recorded in the fourth quarter of 2005;
- Difficulties in integration of the operations, technologies, and products of the acquired companies, which may require significant attention of our management that otherwise would be available for the ongoing development of our business;
- The assumption of certain known and unknown liabilities of the acquired companies; and
- Difficulties in retaining key relationships with employees, customers, partners and suppliers of the acquired company.

Any of these factors could have a negative impact on our business, results of operations or financing position.

Future acquisitions could also result in potentially dilutive issuances of equity securities, the incurrence of debt, contingent liabilities and/or amortization expenses related to certain intangible assets and increased operating expenses, which could adversely affect our results of operations and financial condition. Further, any additional equity financing, debt financing, or credit facility used for such acquisition may not be on satisfactory terms, and any such financing or facility may place restrictions on our business. In addition, to the extent that the economic benefits associated with any of our acquisitions diminish in the future, we may be required to record additional write downs of goodwill, intangible assets or other assets associated with such acquisitions, which would adversely affect our operating results.

*We may not realize the benefits that we anticipate from our recent acquisitions of the diagnostic division of Amplimedical, the rapid cardiac immunoassay test business of Spectral Diagnostics, of Epoch Biosciences, Inc. or of SynX Pharma Inc. or other acquisitions due to integration and other challenges.*

On May 1, 2006, we completed the acquisition of the molecular testing division of Amplimedical S.r.L. On February 6, 2006, we completed the acquisition of the rapid cardiac immunoassay test business of Spectral Diagnostics ( Spectral ). In 2004, we completed two significant acquisitions: the acquisition of SynX Pharma, Inc. ( SynX ) in April 2004 and Epoch Biosciences, Inc. ( Epoch ) in December 2004. We expect that the Spectral and SynX product lines will accelerate our entry into the point-of-care market and that the Amplimedical and Epoch acquisitions will broaden our reach in the molecular diagnostics market. However, we cannot be certain that we will achieve these and other benefits which we currently expect from these acquisitions. The process of integrating these and other acquired companies requires significant efforts and expenditures, including the coordination of information technologies, research and development, sales and marketing, administration and manufacturing. Combining our product offerings with those of acquired companies is a complex and lengthy process involving a number of steps in which we will seek to achieve increasing degrees of integration of our products. Additionally, Amplimedical is located in Italy, Spectral and SynX are located in Canada, and Epoch is located in the state of Washington, and because our facilities in San Diego, California are or may be physically separated from facilities of other companies we acquire, it may be difficult for us to communicate effectively with, manage and integrate these employees and operations with the rest of the Company. If we are not able to integrate the operations of these acquired companies and businesses successfully, we may not be able to meet our expectations of future results of operations.

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Factors that will affect the success of these acquisitions and any future acquisitions include the following:

- our ability to manage a more complex corporate structure that requires additional resources for such responsibilities as tax planning, foreign currency management, financial reporting and risk management;
- our ability to retain key employees of acquired companies;
- our ability to increase revenues due to the integration of the products and technologies of the acquired companies; and
- our ability to operate efficiently following the completion of acquisitions and to achieve cost savings.

Even if we are able to successfully integrate our acquired operations, we may never realize the anticipated benefits of the SynX, Epoch, Spectral or Amplimedical acquisitions, or any other acquisition. Our failure to achieve these benefits and synergies could have a material adverse effect on our business, results of operations and financial condition.

*Competing technologies may adversely affect us.*

We expect to encounter intense competition from a number of companies that offer products in our targeted application areas. We anticipate that our competitors in these areas will include:

- health care and other companies that manufacture laboratory-based tests and analyzers;
- diagnostic and pharmaceutical companies;
- companies developing drug discovery technologies;
- companies developing molecular diagnostic tests; and
- companies developing point-of-care diagnostic tests.

If we are successful in developing products in these areas, we will face competition from established companies and numerous development-stage companies that continually enter these markets. In many instances, our competitors have substantially greater financial, technical, research and other resources and larger, more established marketing, sales, distribution and service organizations than us. Moreover, these competitors may offer broader product lines and have greater name recognition than us and may offer discounts as a competitive tactic.

In addition, several development-stage companies are currently making or developing products that compete with or will compete with our potential products. Our competitors may succeed in developing, obtaining approval from the FDA or marketing technologies or products that are more effective or commercially attractive than our current or potential products or that render our technologies and current or potential products obsolete.

As these companies develop their technologies, they may develop proprietary positions that may prevent us from successfully commercializing products.

Also, we may not have the financial resources, technical expertise or marketing, distribution or support capabilities to compete successfully in the future.

*The uncertainty of patent and proprietary technology protection may adversely affect us.*

Our success will depend in part on obtaining, maintaining and enforcing meaningful patent protection on our inventions, technologies and discoveries. Our ability to compete effectively will depend on our ability to develop and maintain proprietary aspects of our technology, and to operate without infringing the proprietary rights of others, or to obtain rights to third-party proprietary rights, if necessary. Our pending patent applications may not result in the issuance of patents. Our patent applications may not have priority over others applications,

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and even if issued, our patents may not offer protection against competitors with similar technologies. Any patents issued to us may be challenged, invalidated or circumvented, and the rights created thereunder may not afford us a competitive advantage. Budgetary concerns may cause us to not file, or continue, litigation against known infringers of our patent rights, or may cause us not to file for, or pursue, patent protection for all of our inventive technologies in jurisdictions where they may have value.

We also rely upon trade secrets, technical know-how and continuing inventions to develop and maintain our competitive position. Others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology and we may not be able to meaningfully protect our trade secrets, or be capable of protecting our rights to our trade secrets. We seek to protect our technology and patents, in part, by confidentiality agreements with our employees and contractors. Our employees may breach their existing confidentiality agreements and these agreements may not protect our intellectual property. This could have a material adverse effect on us.

*Our products could infringe on the intellectual property rights of others, which may subject us to future litigation and cause us to be unable to license technology from third parties.*

Our commercial success also depends in part on us neither infringing valid, enforceable patents or proprietary rights of third parties, nor breaching any licenses that may relate to our technologies and products. We are aware of other third-party patents that may relate to our technology. It is possible that we may unintentionally infringe these patents or other patents or proprietary rights of third parties. In the past, we and the companies we have acquired have received, and may in the future receive, notices claiming infringement from third parties as well as invitations to take licenses under third-party patents which have, in some instances, resulted in litigation, settlement of litigation and our licensing of third party intellectual property rights. In particular, the receipt of infringement notices by us may subject us to costly litigation, divert management resources and result in the invalidation of our intellectual property rights. These claims may require us to pay significant damages, cease production of infringing products, terminate our use of infringing technologies or develop non-infringing technologies. Further, any legal action against us or our collaborative partners claiming damages and seeking to enjoin commercial activities relating to our products and processes affected by third- party rights may require us or our collaborative partners to obtain licenses in order to continue to manufacture or market the affected products and processes. These actions may also subject us to liability for damages. Although in the past we and the companies we have acquired have succeeded in settling some third party claims concerning alleged infringement of intellectual property rights, which settlements have involved the payment of royalties by us or such companies we have acquired, there can be no assurance that in the future we would be successful in settling such claims. In addition, there can be no assurance that, even if such settlements are achieved, that they would be on commercially reasonably terms or would not otherwise have a material adverse impact on the company s business. We or our collaborative partners may not prevail in an action and any license required under a patent may not be made available on commercially acceptable terms, or at all.

There are many U.S. and foreign patents and patent applications held by third parties in our areas of interest, and we believe that there may be significant other litigation in the industry regarding patent and other intellectual property rights. Additional litigation could result in substantial costs and the diversion of management s efforts regardless of the result of the litigation. Additionally, the defense and prosecution of interference proceedings before the U.S. Patent and Trademark Office, or USPTO, and related administrative proceedings would result in substantial expense to us and significant diversion of effort by our technical and management personnel. We may in the future become subject to other USPTO interference proceedings to determine the priority of inventions. In addition, laws of some foreign countries do not protect intellectual property to the same extent as do laws in the U.S., which may subject us to additional difficulties in protecting our intellectual property in those countries.

We have opposed one allowed European patent granted to Oxford Gene Technology that had broad claims to array technology for analyzing a predetermined polynucleotide sequence. After our opposition to this patent, Oxford Gene Technology narrowed its claims. However, we are still opposing such narrower claims before the

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European Patent Office s Opposition Division. Even if Oxford Gene Technology successfully defends its current, narrower claims, and even if a patent is subsequently granted for such claims, we do not believe that our product will infringe upon such claims. Nonetheless, Oxford Gene Technology may still later assert that some of our products infringe upon its patents that Oxford Gene Technology may obtain from time to time. If the decision of the Opposition Division is successfully appealed by Oxford Gene and the original claims are reinstated, or if an application relating to arrays is issued in another country with claims as broad as the original European patent, we could be subject to infringement accusations that could delay or preclude sales of some of our anticipated diagnostic products, and we may incur unanticipated cost in defending such accusations.

*We may continue to be involved in intellectual property litigation that may be costly, time-consuming and may impact our competitive position.*

In December 2002, Oxford Gene filed a complaint against us in the United States District Court for the District of Delaware claiming that we infringe U.S. Patent No. 6,054,270 entitled Analytical Polynucleotide Sequences. In April 2003, we filed an answer to the complaint that denied that we infringe this patent. In October 2003, we entered into a tolling agreement with Oxford Gene pursuant to which the lawsuit was dismissed by Oxford Gene without prejudice. Under the tolling agreement, we are obligated to give Oxford Gene notice if we determine that we desire to commercialize DNA arrays for use in certain assay formats. If that notice is given, we and Oxford Gene are obliged to discuss in good faith for 30 days whether we wish to acquire, and whether Oxford Gene is willing to grant a license under the patent involved in the litigation. If we and Oxford Gene are unable to enter into such a license or other agreement within such 30 days, Oxford is free to re-initiate the litigation.

On June 30, 2005, we gave Oxford Gene notice that we desired to commercialize DNA arrays for use in such assay formats. Oxford Gene is now free to re-initiate the litigation against us under the tolling agreement. If the litigation were to be reinitiated, significant attorneys costs and fees could result. Although it is our position that Oxford Gene s assertions of infringement have no merit, neither the outcome of any further litigation nor the amount and range of potential fees can be assessed. No assurances can be given that we would prevail in any future lawsuits or that we could successfully defend ourselves against any future claims.

*The regulatory clearances and approvals required to manufacture, market and sell our products are uncertain, and our failure to comply with such clearances and approvals could have a material adverse effect on our company.*

Unless otherwise exempt, medical devices require FDA approval or clearance prior to marketing in the United States. We believe our currently marketed products, including general laboratory instruments and analyte specific reagents as well as certain of those products we intend to market in the future, other than our CHF test in development and assets we acquired in our Spectral acquisition, are not subject to 510(k) clearance or premarket approval requirements. As a result, to date we have not applied for FDA or any other regulatory approvals or clearances with respect to any of our products other than with respect to our CHF test. Obtaining 510(k) clearance and premarket approval may be time-consuming, expensive and uncertain. The regulatory approval or clearance process required to manufacture, market and sell our existing and future products is currently uncertain. If the FDA or other regulatory authorities assert that our products are subject to 510(k) clearance and premarket approval requirements or other similar procedures, our business may experience incremental costs, increased regulatory risks and production delays. In addition, we could be subject to:

- the recall or seizure of our products;
- total or partial suspension of the production of our products;
- the failure of the government to grant premarket clearance or premarket approval for our devices or the withdrawal of marketing clearances or approvals once granted to us;
- substantial delay in the manufacture or sale of our current or future products;

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limitations on intended uses imposed as a condition of approvals or clearances; or

criminal prosecution, civil penalties, other administrative sanctions or judicially imposed sanctions, such as injunctions.

In the third quarter of 2005, we received an untitled letter from the Office of In Vitro Diagnostic Devise Evaluation and Safety (OIVD), a division of the FDA. The letter described the OIVD s concerns that the microarray NanoChip® systems and certain related ASRs might be construed as a medical device that requires a premarket notification/application. During the first quarter of 2006 we met with the FDA and made certain changes in our marketing materials and sales approach in response to their input. In September 2006, the FDA, published Draft Guidance for Industry and FDA Staff: Commercially Distributed Analyte Specific Reagents (ASRs): Frequently Asked Questions setting forth the FDA s interpretation of the regulations governing the sale of ASR products. Subsequently, we received a second letter from the OIVD in which the FDA asserted that our microarray and multiplexed reagents require premarket review. In November 2006, we met with the FDA to discuss the second letter. We believe that our microarray NanoChip® systems and ASR products are not subject to FDA premarket review. If there is an unfavorable decision by the FDA in these matters, it could delay or prevent sales of our NanoChip®400 to clinical laboratories in the United States and could adversely impact sales of our ASRs to clinical laboratories in the United States. During 2007, we plan to submit the 501(k) for the NanoChip®400 system with one or more assays to the FDA for clearance.

Thus far the FDA has not agreed with our position that the NanoChip®400 and all of our ASR products are not subject to 510(k) clearance or the premarket approval process. The FDA may ultimately require that we submit our existing and/or future products to the premarket approval process or the 510(k) clearance process, either of which may be time- consuming, expensive and uncertain. In addition, if we submit our current products to the premarket approval process or the 510(k) clearance process, it is unclear what the impact would be on our products that have been or are being sold without such approvals. We may be allowed to continue to market our current products pending the outcome of the clearance or approval process for each product, but there can be no assurance that the FDA would not require us to withdraw one or more of our products from the marketplace pending receipt of such approvals or clearances. If the FDA makes any such determination or otherwise disagrees with our position, the FDA could preclude us from shipping the NanoChip® 400 in the United States until we have received FDA clearance. In addition, the FDA could subject us to any of the penalties described above, including administrative or judicially imposed sanctions and the recall or seizure of our products. Any such result could substantially delay the release of our current and future products. Furthermore, any such result would have a material adverse effect on our business, financial position and results of operations, and the market value of our common stock could decline.

Based on the new draft guidance documents and our ongoing interactions with the FDA, we will undertake to accelerate the development and filing of 510(k) applications for the NanoChip® 400 and test kits for use on the system. This will increase our costs of product development and divert resources from other product development efforts. We believe that our real-time ASR products comply with regulations. However, if FDA s guidance documents are finalized in their current form, we will incur substantial cost to repackage our products to meet the draft guidelines. This will also increase cost and divert resources from other efforts. Further, there can be no assurance that the reconfigured ASR products would be acceptable to all of our customers.

*The regulatory approval process for our products may be expensive, time-consuming and uncertain.*

To the extent that our products require FDA or other regulatory approval or clearance prior to marketing, such regulatory approval process may be expensive, time-consuming, uncertain and may prevent us from obtaining or maintaining required approvals for the commercialization of our products, which may have a significant impact on our business. It generally takes at least three to six months from the time of submission or more to obtain 510(k) clearance, but the process may take longer if the FDA requests more data or research. The premarket approval process takes between one and two years from the time of submission. Regulatory clearance

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or approval of any of our products may not be granted by the FDA or foreign regulatory authorities for several years, if at all. Our failure to obtain required approvals from regulatory authorities could have a material adverse effect on our business, results of operations and financial condition. In other countries, the manufacture or sale of our products may require approval by local government agencies with missions comparable to the FDA s. The process of obtaining any such approval may also be lengthy, expensive and uncertain.

We expect to submit some of our products in the future to the 510(k) clearance process or premarket approval process and, as such, expect to incur significant expenses in order to receive such clearances or approvals. We also cannot predict the likelihood of obtaining such clearances or approvals. The failure to obtain such clearances or approvals could prevent the successful development, introduction and marketing of certain of our products, and could cause the market price for our stock to decline.

In addition, whether or not our products are subject to 510(k) clearance or premarket approval, we are subject to certain FDA regulations covering, among other things, manufacturing, promotions and medical device reporting. For instance, manufacturing facilities are required to adhere to the FDA s current Quality System Regulations, including extensive record keeping and reporting and periodic inspections of our manufacturing facilities. Similar requirements are imposed by foreign governmental agencies. Compliance with these regulations requires substantial expenditures of time, money and effort in such areas as production and quality control to ensure full compliance. Failure to comply with such regulations at one of our manufacturing facilities could result in an enforcement action brought by the FDA, which could include withholding the approval of products manufactured at that facility or all facilities registered with FDA under our name.

*If we are unable to manufacture products on a commercial scale, our business may suffer.*

Hitachi manufactures our NanoChip® System, including the second-generation NanoChip® 400; PBM will manufacture certain of our point-of-care products; and we manufacture our NanoChip® Cartridges, our ASRs, the cardiac product line acquired from Spectral, and most of our other products. We, Hitachi and PBM rely on subcontractors to manufacture the limited quantities of microchips and other components we require for use by and sale to our customers, as well as for internal and collaborative purposes. Manufacturing, supply and quality control problems may arise as we, Hitachi or PBM either alone, together or with subcontractors, attempt to further scale up manufacturing procedures or to manufacture new products. We, Hitachi or PBM may not be able to scale-up in a timely manner or at a commercially reasonable cost. Problems could lead to delays or pose a threat to the ultimate commercialization of our products and cause us to fail.

We, Hitachi or PBM or any of our contract manufacturers could encounter manufacturing difficulties, including those relating to:

- the ability to scale up manufacturing capacity;
- production yields;
- quality control and assurance; or
- shortages of components or qualified personnel.

Our manufacturing facilities and those of Hitachi and PBM and any other of our contract manufacturers are or will be subject to periodic regulatory inspections by the FDA and other federal, state and international regulatory agencies and these facilities are or may become subject to Quality System Regulation, or QSR, requirements of the FDA. If we, Hitachi, PBM or our third-party manufacturers, fail to maintain facilities in accordance with QSR regulations, other international quality standards or other regulatory requirements, then the manufacture process could be suspended or terminated which would harm us.

*Our dependence on suppliers for materials could impair our ability to manufacture our products.*

Outside vendors provide key components and raw materials used by us, Hitachi and PBM in the manufacture of our products. Although we believe that alternative sources for these components and raw

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materials are available, any supply interruption in a limited or sole source component or raw material would harm our and Hitachi s or PBM s ability to manufacture our products until a new source of supply is identified and qualified, including qualification under applicable FDA regulations. In addition, an uncorrected defect or supplier s variation in a component or raw material, either unknown to us, Hitachi or PBM or incompatible with our, Hitachi or PBM s manufacturing processes, could harm our, Hitachi or PBM s ability to manufacture our products. We, Hitachi or PBM may not be able to find a sufficient alternative supplier in a reasonable time period, or on commercially reasonable terms, if at all. If we, Hitachi or PBM fail to obtain a supplier for the manufacture of components of our products, we may be forced to curtail or cease operations.

*Lead times for obtaining materials and components for our products and the manufacturing and introduction of our products may vary significantly which could lead to excess inventory levels as well as shortages of critical components and products if our supply and demand forecasts are inaccurate.*

We anticipate that our products, including our ASRs and most of our other products will be manufactured and introduced by us and third parties, if any, based on forecasted demand and that we will seek to purchase components and materials in anticipation of the actual receipt of purchase orders from our customers. Lead times for materials and components to be included in our products vary significantly and may depend on factors such as the business practices of each specific supplier and the terms of the particular contracts, as well as the overall market demand for such materials and components at any given time. Also, we often rely on our own and third party forecasted demand for various products and the accuracy of such forecasts may depend on a number of factors, including but not limited to, government reports and recommendations for certain genetic testing, regulatory burdens, competitive products, the nature and effectiveness of our products, the timing and extent of the introduction of our products into the marketplace and other factors. If the forecasts are inaccurate, we could experience fluctuations in excess inventory of our products, or shortages of critical components or products, either of which could cause our business to suffer.

*We currently rely on one manufacturer of our NanoChip® 400 and other hardware products, and we will rely on another manufacturer for our some of point-of-care products, and such reliance may delay the manufacture and shipment of our products to customers.*

We have signed an exclusive manufacturing agreement with Hitachi to manufacture our second generation NanoChip® 400 workstations and other hardware products to be developed by us. In addition, we have an exclusive manufacturing agreement with PBM for the manufacture of certain future point-of-care products, including CHF tests.

Because we are solely dependent on these companies for the manufacture of these products, any disruption in either of these companies businesses or in our relationship with such companies may have a material adverse effect on our business. To the extent we have adverse developments in our relationship with Hitachi or PBM, or to the extent we develop contractual disputes, it may have an adverse impact on our business, our ability to implement existing products or launch new products. In particular, to the extent we seek to amend, modify or extend or otherwise change aspects of our contractual relationship with either of these parties, we may experience manufacturing delays associated with negotiating the terms of those arrangements and other related complications. If we determine to curtail or terminate our manufacturing relationship with either of these parties, a lengthy process would be required to negotiate and begin work under a manufacturing agreement with a new manufacturer which could disrupt our manufacturing process and harm our business. Furthermore, the manufacturing of certain point-of-care products, including CHF tests, depends on certain intellectual property owned by PBM and licensed by PBM from third parties, and we may not be able to manufacture or find an alternative manufacturer of the design of these products without this intellectual property, which would severely impact our point-of-care products.

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*The number of our sales and marketing employees may not result in corresponding numbers of sales or placements of the NanoChip® System, the sale of ASRs, point-of-care diagnostic products or other Nanogen products.*

As of December 31, 2006, we had 64 total employees in our worldwide sales and marketing group.

Developing, training and monitoring this sales and marketing force has required and will further require capital and time expenditures by us and certain of our employees. The size of our sales and marketing force may not result in corresponding numbers of sales or placements of the NanoChip® System nor increased product revenues associated with such sales or placements or our ASRs, point-of-care diagnostic products or other products. We may be required to increase or decrease the size of the sales and marketing force as deemed necessary and such increases or decreases in staff will require additional capital and time expenditures by us and our employees.

*Failure to expand our international sales as we intend would reduce our ability to become profitable.*

We expect that a portion of our sales will be made outside the United States. A successful international effort will require us to develop relationships with international customers and partners. We may not be able to identify, attract or retain suitable international customers and distribution partners. As a result, we may be unsuccessful in our international expansion efforts. Furthermore, expansion into international markets will require us to continue to establish and expand foreign sales and marketing efforts, hire additional sales and marketing personnel and maintain good relations with our foreign customers and distribution partners.

International operations involve a number of risks not typically present in domestic operations, including:

- currency fluctuation risks;
- changes in regulatory requirements;
- political and economic instability, including the war on terrorism; and
- difficulties in staffing and managing foreign offices.

In addition, we expect increased costs in deploying the NanoChip® System, including the second-generation NanoChip® 400, ASRs, point-of-care diagnostics, and other products in foreign countries due to:

- licenses, tariffs and other trade barriers;
- costs and difficulties in establishing and maintaining foreign distribution partnerships;
- potentially adverse tax consequences; and
- the burden of complying with a wide variety of complex foreign laws and treaties.

*Our international sales and marketing efforts will also be subject to the risks associated with the imposition of legislation and regulations relating to the import or export of high technology products. We cannot predict whether tariffs or restrictions upon the importation or exportation of our products will be implemented by the United States or other countries.*

We may lose money when we exchange foreign currency received from international sales into U.S. dollars. A portion of our business is expected to be conducted in currencies other than the U.S. dollar. We recognize foreign currency gains or losses arising from our operations in the period incurred. As a result, currency fluctuations between the U.S. dollar and the currencies in which we do business will cause foreign currency transaction gains and losses. We cannot predict the effects of exchange rate fluctuations upon our future operating results because of the number of currencies involved, the variability of currency exposure and the potential volatility of currency exchange rates. We currently do not engage in foreign exchange hedging transactions to manage our foreign currency exposure.

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*We may have significant product liability exposure.*

We face an inherent business risk of exposure to product liability and other claims in the event that our technologies or products are alleged to have caused harm. These risks are inherent in the testing, manufacturing and marketing of our products. In addition, we began a targeted acquisition strategy during 2004, and our due diligence of acquired companies may fail to reveal material risks relating to product liabilities of such companies. Any product liability claim brought against us could be expensive to defend and could result in a diversion of management s attention from our core business. We may be required to pay substantial damages in connection with any product liability claims. A successful product liability claim or series of claims could have an adverse effect on our business, financial condition and results of operations. Further, we may not be able to maintain adequate levels of product liability insurance at reasonable cost or reasonable terms. Excessive insurance costs or uninsured claims would add to our future operating expenses and adversely affect our financial condition.

*If we lose our key personnel or are unable to attract and retain additional personnel, we may not be able to pursue collaborations or develop our own products.*

We are highly dependent on the principal members of our scientific, manufacturing, marketing, administrative, management and executive personnel, the loss of whose services might significantly delay or prevent the achievement of our objectives. We face competition from other companies, academic institutions, government entities and other organizations in attracting and retaining personnel. For the twelve months ended December 31, 2006, 2005 and 2004, we experienced turnover rates of 13%, 17% and 27%, respectively. Turnover at these rates may continue and, if they continue, may adversely affect us.

The turnover rates above exclude the impact of reductions in workforce. In October 2006, we announced a reduction in force of approximately 15% of our workforce and incurred severance related expenses of approximately $500,000 in the fourth quarter of 2006. This reduction in force was a combination of selective rehiring of voluntary terminations and planned separations as we integrated the activities or our various acquisitions. Several of the planned separations did not occur until the first quarter of 2007. Future layoffs could have an adverse effect on us.

*Health care reform and restrictions on reimbursement may adversely affect our business.*

In recent years, health care payors as well as federal and state governments have focused on containing or reducing health care costs. We cannot predict the effect that any of these initiatives may have on our business, and it is possible that they will adversely affect our business. Health care cost containment initiatives focused on genetic testing could cause the growth in the clinical market for diagnostic testing to be curtailed or slowed. In addition, health care cost containment initiatives could cause pharmaceutical companies to reduce research and development spending. In either case, our business and our operating results would be harmed. In addition, diagnostic testing in clinical settings is often billed to third-party payors, including private insurers and governmental organizations. If our current and future clinical products are not considered cost-effective by these payors, reimbursement may not be available to users of our products. In this event, potential customers would be much less likely to use our products, and our business and operating results could be seriously harmed.

In addition, sales of our future products may depend, in large part, on the availability of adequate reimbursement to users of those products from government insurance plans, managed care organizations and private insurance plans. Physicians recommendations to use our products may be influenced by the availability of reimbursement by insurance companies and other third-party payors. There can be no assurance that insurance companies or third-party payors will provide coverage for our products or that reimbursement levels will be adequate for the reimbursement of the providers of our products. In addition, outside the United States, reimbursement systems vary from country to country and there can be no assurances that third-party reimbursement will be made available at an adequate level, if at all, for our products under any other reimbursement system. Lack of or inadequate reimbursement by government or other third-party payors for our products could have a material adverse effect on our business, financial condition and results of operations.

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*If ethical and other concerns surrounding the use of genetic information become widespread, we may have less demand for our products.*

Genetic testing has raised ethical issues regarding confidentiality and the appropriate uses of the resulting information. For these reasons, governmental authorities may call for limits on or regulation of the use of genetic testing or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Any of these scenarios could reduce the potential markets for our products, which could seriously harm our business, financial condition and results of operations.

*We use hazardous materials in our business. Any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly.*

Our research and development processes involve the controlled storage, use and disposal of hazardous materials including, but not limited to, biological hazardous materials and radioactive compounds. We are subject to federal, state and local regulations governing the use, manufacture, storage, handling and disposal of materials and waste products. Although we believe that our safety procedures for handling and disposing of these hazardous materials comply with the standards prescribed by law and regulation, the risk of accidental contamination or injury from hazardous materials cannot be completely eliminated. In the event of an accident, we could be held liable for any damages that result, and any liability could exceed the limits or fall outside the coverage of our insurance. We may not be able to maintain insurance on acceptable terms, or at all. We could be required to incur significant costs to comply with current or future environmental laws and regulations.

*Our stock price could continue to be highly volatile and our stockholders may not be able to resell their shares at or above the price they paid for them.*

The market price of our common stock, like that of many other life sciences companies, has been highly volatile and is likely to continue to be highly volatile. The following factors, among others, could have a significant impact on the market price of our common stock:

- period-to-period fluctuations in sales, inventories and our operating results;
- asset impairment charges, including goodwill and other intangible assets;
- adoption of new stock option expensing rules;
- the announcement of issues involving our liquidity;
- that announcement of product development failures;
- the announcement of financing or acquisitions that dilutes our equity;
- the results of our premarket studies and clinical trials or those of our collaborators or competitors or for diagnostic testing in general;
- evidence of the safety or efficacy of our potential products or the products of our competitors;
- the announcement by us or our competitors of technological innovations or new products;

the announcement by us of acquisitions by customers of our molecular testing platforms, ASRs or our other products;

announcements by us of government or private grants or contracts or of failure to obtain such government or private grants or contracts;

announcements by us of involvement in litigation;

developments concerning our patents or other proprietary rights or those of our competitors, including other litigation or patent office proceedings;

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loss of key board, executive, management or other personnel or the increase or decrease in size of our sales and marketing staff;

governmental regulatory actions or the failure to gain necessary clearances or approvals;

the ability to obtain necessary licenses;

changes or announcements in reimbursement policies;

developments with our subsidiaries and collaborators;

changes in or announcements relating to acquisition programs for our products, including the expiration or continuation of our development site agreements;

market conditions for life science stocks, nanotechnology stocks and other stocks in general;

changes in estimates of our performance by securities analysts and the loss of coverage by one or more securities analysts;

the announcement by us of any stock repurchase plan, any purchases made thereunder by us and any cessation of the program by us; and

changes in the United States war on terrorism and other geopolitical and military situations in which the country is involved.

*Investor confidence and share value may be adversely impacted if our independent auditors are unable to provide us with the attestation of the adequacy of our internal controls over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act of 2002.*

As directed by Section 404 of the Sarbanes-Oxley Act of 2002, the SEC adopted rules requiring public companies to include a report of management on our internal controls over financial reporting in our annual reports on Form 10-K and quarterly reports on Form 10-Q that contains an assessment by management of the effectiveness of our internal controls over financial reporting. In addition, our independent auditors must attest to and report on management s assessment of the effectiveness of our internal controls over financial reporting as of the end of the fiscal year. How companies are maintaining their compliance with these requirements including internal control reforms, if any, to comply with the requirements of Section 404, and how independent auditors are applying these requirements and testing companies internal controls, remain subject to some uncertainty. We expect that our internal controls will continue to evolve as our business activities change. In addition, the acquisitions of SynX and Epoch made during 2004, our minority interest investment in Jurilab in 2005, and the acquisitions Spectral and Amplimedical in 2006, and any future acquisitions we make may impact our ability to maintain effective internal controls over financial reporting. Further, if, during any year, our independent auditors are not satisfied with our internal controls over financial reporting, including the internal controls over financial reporting of SynX, Epoch, Jurilab, Spectral or Amplimedical or the level at which these controls are documented, designed, operated, tested or assessed, or if the independent auditors interpret the requirements, rules or regulations differently than we do, then they may decline to attest to management s assessment or may issue a report that is qualified. This could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our financial statements, which ultimately could negatively impact the market price of our shares.

*Our anti-takeover provisions could discourage potential takeover attempts and make attempts by stockholders to change management more difficult.*

The approval of two-thirds of our voting stock is required to take some stockholder actions, including the amendment of any of the anti-takeover provisions contained in our certificate of incorporation or amendment of our bylaws.

Further, pursuant to the terms of our stockholder rights plan adopted in November 1998, as amended, we have distributed a dividend of one right for each outstanding share of common stock. These rights will cause

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substantial dilution to the ownership of a person or group that attempts to acquire us on terms not approved in advance by our board of directors and may have the effect of deterring unsolicited takeover attempts.

*Our business is subject to changing regulation of corporate governance and public disclosure that has increased both our costs and the risk of noncompliance.*

Because our common stock is publicly traded, we are subject to certain rules and regulations of federal, state and financial market exchange entities charged with the protection of investors and the oversight of companies whose securities are publicly traded. These entities, including the Public Company Accounting Oversight Board, the SEC and the Nasdaq Global Market, have continued to develop additional regulations and requirements in response to laws enacted by Congress, most notably the Sarbanes-Oxley Act of 2002. Our efforts to comply with these new regulations have resulted in, and are likely to continue to result in, increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities.

Moreover, because these laws, regulations and standards are subject to varying interpretations, their application in practice may evolve over time as new guidance becomes available. This evolution may result in continuing uncertainty regarding compliance matters and additional costs necessitated by ongoing revisions to our disclosure and governance practices.

*We have agreed to guarantee certain annual minimum payments and perform other obligations under our agreement with DRT for the assignment of our rights associated with our Applied Biosystems royalty agreement, or the ABI agreement. A reduction of royalty payments under or early termination of the ABI agreement would seriously impair our ability to make these minimum payments or perform our obligations under the DRT agreement, which would have a material adverse effect on us.*

In September 2006 we assigned to DRT our rights to receive royalty payments and related reports under the ABI agreement for an upfront payment approximately $20 million. Under our agreement with DRT, if annual royalties generated under the ABI agreement is less than a specified minimum amount, we are required to make payments to DRT to achieve such minimum amount. To secure our obligations under the DRT agreement, including the obligation to make such minimum royalty payments, we granted DRT a first priority security interest in our patents licensed under the ABI agreement. If the ABI agreement does not generate sufficient sales volume, or if the ABI agreement is terminated by ABI prior to the expiration of the DRT agreement, we will be required to make minimum royalty payments to DRT. There is no assurance that we will have sufficient funds or assets to cover such payments. If the ABI agreement is terminated, we may not be able to obtain replacement royalty arrangement on a timely basis or at all to cover our payment obligations under the DRT agreement. Furthermore, failure to make minimum payment or perform other obligations under the DRT agreement may result in a default under our security agreement with DRT, which, if not cured, would impair our ownership and practice of the patents licensed under the ABI agreement. This will have a material adverse effect on us.

*Our relationship with Jurilab subjects us to numerous risk and uncertainties.*

Since July 2005, we acquired a minority equity interest in Jurilab of approximately 29.7% and we hold two of Jurilab s four board of director seats. Our relationship with Jurilab subjects us to numerous risk and uncertainties, including:

- we have invested approximately $3.0 million in Jurilab and we may lose all of our investment;
- we are required to consolidate Jurilab s financial statements with our own and as a result our operating results may be less predictable, subject to significant fluctuation beyond our control and adversely affected by the results of Jurilab;
- we are required to maintain internal controls and related documentation as required by Section 404 of the Sarbanes-Oxley Act of 2002 despite only being a minority owner of this Finnish company that is not

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otherwise subject to this U.S regulatory requirement; however, any significant deficiencies or material weaknesses found in the internal control structure at Jurilab may result in an unfavorable audit opinion on our consolidated internal control structure;

our relationship with Jurilab may require our management to devote substantial time and resources to Jurilab s business, which may adversely affect our business;

we have the right to acquire Jurilab, and if we exercise this right, it would entail significant risks, which risks would be even more acute because Jurilab is an early stage company; and

in the event we were to acquire Jurilab, we would likely be required to seek additional financing that may not be available to us on acceptable terms, or at all.

*Terrorist attacks, war, natural disasters and other catastrophic events may negatively impact aspects of our operations, revenue, costs and stock price.*

Threats of terrorist attacks in the United States of America, as well as future events occurring in response to or in connection with them, including, without limitation, future terrorist attacks or threats against United States of America targets, rumors or threats of war, actual conflicts involving the United States of America or its allies, including the on-going U.S. conflicts in Iraq and Afghanistan, further conflicts in the Middle East and in other developing countries, or military or trade disruptions affecting our domestic or foreign suppliers of merchandise, may impact our operations. Our operations also may be affected by natural disasters or other similar events, including floods, hurricanes, earthquakes or fires. Our California and Washington facilities, including our corporate offices and principal product development facilities, are located near major earthquake faults. The potential impact of any of these events to our operations includes, among other things, delays or losses in the delivery of products by us and decreased sales of such products. Additionally, any of these events could result in increased volatility in the United States of America and worldwide financial markets and economies. Also, any of these events could result in economic recession in the United States of America or abroad. Any of these occurrences could have a significant impact on our operating results, revenue and costs and may result in the volatility of the future market price of our common stock.

**Item 1B.** ***Unresolved Staff Comments***

None.

**Item 2.** ***Properties***

At December 31, 2006, we occupied the indicated square footage in the leased facilities described below:

| Number of Buildings | Location | Total Square Footage | Primary Use |
|---|---|---|---|
| 1 | San Diego, California | 51,000 | Administrative offices, research and development, sales and marketing and manufacturing for a term ending on March 31, 2010 (with an option to extend). |
| 1 | Bothell, Washington | 30,000 | Research and development, sales and marketing and manufacturing for a term ending in 2012. |
| 1 | Toronto, Canada | 50,000 | Administrative offices, research and development, and sales and marketing for a term ending in 2012. |
| 1 | Toronto, Canada | 42,000 | Manufacturing and administrative offices for a term ending in July 2007. |
| 1 | Milan, Italy, | 5,000 | Administrative and sales and marketing offices subleased for a term ending January 2007. |
| 1 | Turin, Italy | 14,300 | Research and development, sales and marketing and manufacturing for a term ending February 2007. |

| | | | |
|---|---|---|---|
| 1 | Kuopion, Finland | 6,700 | Research and development and administrative offices on a month-to-month lease, with a three month notice requirement. |

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Our leases expire at varying dates through 2012 not including renewals at our option. We believe that our facilities will be suitable and adequate for the present purposes, and that the productive capacity in the San Diego, Bothell and in the Italian facilities are substantially being utilized. The lease in Turin, Italy was renewed in 2007. In addition, during 2007 we entered into a new lease in Milan, Italy to replace the administrative and sales and marketing offices utilized in 2006. We have excess capacity in our Toronto facility, and have therefore sublet a portion of the facility to help offset the facility cost. We intend to break the lease in the larger Toronto facility through a provision in the lease agreement and occupy only the smaller Toronto facility beginning in mid-2007. In the future, we may need to purchase, build or lease additional facilities to meet the requirements projected in our long-term business plan.

**Item 3.** ***Legal Proceedings***

We currently are not a party to any material legal proceedings and are not aware of any pending or threatened litigation that would have a material adverse effect on us or our business.

**Item 4.** ***Submission of Matters to a Vote of Security Holders***

No matters were submitted to a vote of security holders during the quarter ended December 31, 2006.

**PART II**

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

Market Information

Our common stock trades on the Nasdaq Global Market under the symbol NGEN. The following table sets forth the range of high and low closing sales prices as reported for our common stock by Nasdaq for the periods indicated:

| **Year ended December 31, 2006** | **High** | **Low** |
|---|---|---|
| 1st Quarter | $ 3.18 | $ 2.26 |
| 2nd Quarter | $ 2.84 | $ 1.61 |
| 3rd Quarter | $ 2.25 | $ 1.71 |
| 4th Quarter | $ 2.23 | $ 1.76 |
| **Year ended December 31, 2005** | | |
| 1st Quarter | $ 6.98 | $ 3.48 |
| 2nd Quarter | $ 4.08 | $ 2.66 |
| 3rd Quarter | $ 4.65 | $ 2.98 |
| 4th Quarter | $ 3.21 | $ 2.58 |

As of February 28, 2007 there were approximately 316 stockholders of record of our common stock. We have not paid any cash dividends to date and do not anticipate any being paid in the foreseeable future.

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**Stock Performance Graph**

The following graph shows the total stockholder return of an investment of $100 in cash on December 31, 2001, through December 31, 2006, for (i) Nanogen s Common Stock, (ii) the Nasdaq Composite Index and (iii) Nasdaq Biotechnology Index. All values assume reinvestment of the full amount of all dividends and are calculated as of December 31 of each year. The comparisons in the graph are required by the Securities and Exchange Commission and are not intended to forecast or be indicative of possible future performance of the Company s Common Stock.

| | Nanogen, Inc. Index | Nasdaq Composite Index | Nasdaq Biotechnology Index |
|---|---|---|---|
| 12/31/01 | $ 100.00 | $ 100.000 | $ 100.000 |
| 12/31/02 | $ 26.86 | $ 68.76 | $ 54.68 |
| 12/31/03 | $ 156.13 | $ 103.68 | $ 79.69 |
| 12/31/04 | $ 127.53 | $ 113.18 | $ 84.56 |
| 12/31/05 | $ 45.23 | $ 115.57 | $ 86.94 |
| 12/31/06 | $ 32.41 | $ 127.58 | $ 87.82 |

*The above Stock Performance Graph and related information shall not be deemed soliciting material or to be filed with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that the Company specifically incorporates it by reference into such filing.*

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**Item 6. Selected Financial Data**

The selected financial data set forth below has been derived from our audited financial statements. This data should be read in conjunction with Management s Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and notes included in this Annual Report on Form 10-K on pages F-1 through F-41 in this document:

| | Years Ended December 31, | | | | |
|---|---|---|---|---|---|
| | 2006[1] | 2005[2] | 2004[3] | 2003 | 2002 |
| | (in thousands, except per share amounts) | | | | |
| **Consolidated Statement of Operations Data:** | | | | | |
| Revenues: | | | | | |
| Product sales | $ 15,996 | $ 4,544 | $ 2,690 | $ 2,762 | $ 3,384 |
| License fees and royalty income | 7,908 | 6,530 | 490 | 84 | 10,844 |
| Contract and grant | 2,948 | 1,470 | 1,694 | 2,367 | 1,596 |
| Sponsored research | | | 500 | 1,500 | 1,355 |
| Total revenues | 26,852 | 12,544 | 5,374 | 6,713 | 17,179 |
| Costs and expenses: | | | | | |
| Cost of product sales | 13,290 | 4,518 | 5,642 | 3,176 | 2,466 |
| Research and development | 25,683 | 22,033 | 18,117 | 18,014 | 21,020 |
| Selling, general and administrative | 33,385 | 23,578 | 18,232 | 15,319 | 20,375 |
| Amortization of purchased intangible assets | 2,987 | 1,571 | | | |
| Impairment charge on goodwill | | 59,000 | | | |
| Charge for acquired in-process research and development | | | 3,758 | | |
| Impairment of acquired in-process technology rights | | 167 | | 1,024 | |
| Total costs and expenses | 75,345 | 110,867 | 45,749 | 37,533 | 43,861 |
| Loss from operations | (48,493) | (98,323) | (40,375) | (30,820) | (26,682) |
| Interest income | 1,046 | 1,408 | 926 | 713 | 2,331 |
| Interest expense | (1,292) | (544) | (409) | (224) | (212) |
| Other income (loss) | (468) | (78) | (221) | (141) | (15) |
| Warrant valuation adjustment | 75 | 1,026 | (74) | | |
| Provision for income tax | (249) | | | | |
| Gain (loss) on sale of investments | | | (47) | (1,925) | 197 |
| Gain (loss) on foreign currency transactions | 311 | 17 | 1,293 | (16) | (21) |
| Minority interest in loss of consolidated subsidiary | | | | 1,817 | 2,156 |
| Net loss | $ (49,070) | $ (96,494) | $ (38,907) | $ (30,596) | $ (22,246) |
| Net loss per share basic and diluted | $ (0.78) | $ (1.95) | $ (1.21) | $ (1.38) | $ (1.02) |
| Number of shares used in computing net loss per share basic and diluted | 63,221 | 49,585 | 32,203 | 22,244 | 21,722 |
| **Consolidated Balance Sheet Data:** | | | | | |
| Cash, cash equivalents and short-term investments | $ 25,184 | $ 32,379 | $ 51,934 | $ 29,114 | $ 52,729 |
| Working capital | 20,621 | 30,651 | 44,999 | 30,872 | 53,050 |
| Total assets | 119,253 | 98,081 | 176,024 | 43,849 | 71,360 |
| Long-term liabilities | 33,160 | 14,536 | 6,065 | 5,005 | 4,219 |
| Accumulated deficit | (360,726) | (311,656) | (215,162) | (176,255) | (145,659) |
| Total stockholders equity | $ 60,213 | $ 74,495 | $ 157,516 | $ 32,823 | $ 57,393 |

(1) 2006 includes the results of operations of Spectral and Amplimedical since February 6, 2006 and May 1, 2006, respectively, the date of acquisitions, which affects comparability of the Selected Financial Data.

(2)

2005 includes the results of operations of Jurilab since of July 20, 2005, the date of consolidation, which affects comparability of the Selected Financial Data.

(3) 2004 includes the results of operations of SynX and Epoch since April 21, 2004 and December 16, 2004, respectively, the date of acquisitions, which affects comparability of the Selected Financial Data.

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

*This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 which provides a safe harbor for these types of statements. To the extent statements in this report involve, without limitation, our expectations for growth, estimates of future revenue, expenses, profit, cash flow, balance sheet items or any other guidance on future periods, these statements are forward-looking statements. Forward-looking statements are not guarantees of performance. They involve known and unknown risks, uncertainties and assumptions that may cause actual results, levels of activity, performance or achievements to differ materially from any results, level of activity, performance or achievements expressed or implied by any forward-looking statement. These risks and uncertainties include those included in Item 1A. Risk Factors. We assume no obligation to update any forward-looking statements. The audited financial statements and this Management s Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with the Consolidated Financial Statements and Notes thereto for the years ended December 31, 2006, 2005 and 2004 in this Annual Report on Form 10-K.*

**Overview**

The following Management s Discussion and Analysis of Financial Condition and Results of Operations ( MD&A ) is intended to help provide the reader a clear and straightforward understanding through the eyes of management of our operations and present business conditions. When used in this management discussion, the terms Nanogen, Company, we, us, or our mean Nanogen, Inc. and its subsidiaries. This overview summa information within the MD&A, which includes the following sections:

*Summary* an executive summary of the significant business events that have occurred after January 1, 2006.

*Our Business* a general description of our business, our technologies and the actions we have taken to develop our business to help the reader better understand our objectives, areas of focus, various strategic investments, relationships and agreements we have entered into after January 1, 2006.

*Critical Accounting Policies and Estimates* an analysis of the judgmental accounting policies, estimates and assumptions we made while completing our condensed consolidated financial statements, to provide the reader an understanding of how these decisions materially effected the results of operations.

*Results of Operations* an analysis of our results of operations for the years ended December 31, 2006, 2005 and 2004, as presented in our financial statements, to provide the reader information about trends and material changes in revenues and expenditures.

*Liquidity and Capital Resources* an analysis of our cash flow statement and financial position to help the reader understand our current and anticipated capital resource requirements and our ability generate the liquidity required to support our current and planned operations.

**Summary:**

The following significant business developments occurred after January 1, 2006:

In February, we completed the acquisition of the rapid cardiac immunoassay test business from Spectral Diagnostics, Inc. (TSX: SDI) for $4.8 million in cash and 975,193 shares of our common stock with a fair value of approximately $2.9 million. The transaction expanded our portfolio of point-of-care diagnostics to include Spectral s Cardiac STATus® and Decision Point product lines, the i-Lynx reader, related intellectual property and manufacturing capabilities. The i-Lynx reader is a unique hand-held reader designed to capture and analyze the results of the Cardiac STATus products. This acquisition provided us a fully integrated point-of-care group with resources and capabilities in manufacturing and sales and marketing with a worldwide distribution network to compete in the point-of-care market.

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In March 2006, we received 510(k) clearance from the FDA to market our *Status*First™ CHF NT-proBNP EDTA plasma test to aid in the diagnosis of individuals suspected of having congestive heart failure (CHF). This was our first 510(k) clearance and is considered a significant milestone toward the commercial launch of our CHF point-of-care test. We are currently considering various product launch alternatives for this product. In addition, we are continuing our development work on the *Status*First CHF whole blood test, which would significantly expand the potential market and revenue generating capability of our CHF product.

In March 2006, we sold approximately 5.7 million shares of our common stock to Fisher Scientific International, Inc. at a price of $2.65 per share in a registered offering, for net proceeds of approximately $15.0 million.

On May 1, 2006 we completed the acquisition of the diagnostics division of Amplimedical S.P.A. ( Amplimedical or Nanogen Advanced Diagnostics ), which is a manufacturer and distributor of molecular diagnostic products, based in Italy, for approximately $9.9 million consisting of a $2.1 million payable secured by a letter of credit securitized by restricted cash, the issuance of a $6.9 million promissory note that was convertible into our common stock, and $0.9 million in transaction costs. On June 30, 2006 we paid the promissory note in full by issuing Amplimedical 2,886,935 shares of our common stock at a $2.63 per share conversion price and incurred no interest charges. Based in Italy, Amplimedical has been active in the European and other markets since the early 1990s with its molecular diagnostic reagents. Nanogen and Amplimedical have shared a business relationship for approximately five years, during which time Amplimedical has been a distributor of Nanogen s NanoChip® Molecular Biology Workstation and NanoChip® 400 instrument systems in Italy. We believe this acquisition will allow our molecular diagnostics business to further expand in Europe by providing additional resources and scale. Amplimedical s portfolio of real-time molecular diagnostic test kits are CE marked for in vitro diagnostics. Amplimedical s diagnostic test kits also include multiplexed reagent kits, sold in Europe, such as the CE/IVD-marked set of reagents used to detect mutations in the GJB2 gene for the diagnosis of hereditary deafness and a research-use-only set of reagents to test for genetic causes of beta thalassemia, a type of inherited blood disorder that can cause anemia.

In September 2006, we received a $20 million upfront payment for an agreement with Drug Royalty Trust ( DRT ), where we assigned certain rights associated with our Applied Biosystems royalty agreement from July 2006 through December 2011. Under the agreement with DRT, we have guaranteed certain annual minimum royalty payments to DRT through 2011 for an aggregate minimum amount of $26.9 million over the term of the agreement.

On October 5, 2006, as a part of our continual focus on narrowing our losses and working towards positive cash flows from operations, we announced a plan to consolidate certain of our North American operations. As a part of this consolidation process we expect to reduce our headcount by approximately 15% across all of our operations by the end of the first quarter of 2007 through a combination of the reduction in force and a limitation on replacements related to normal attrition.

On December 4, 2006 we announced that we were awarded a $4.5 million contract from the U.S. Centers for Disease Control and Prevention (CDC) to develop a unique multi-analyte Point-Of-Care (POC) diagnostic assay for Influenza in support of the US Government s efforts to strengthen its readiness for a potential influenza pandemic. The current award of $4.5 million funds the first two phases of a five-phase development project and, if all five phases are funded by the CDC, can total up to $12.5 million over the next two to three years.

On February 5, 2007, we entered into a placement agency agreement with Ascendiant Securities, LLC ( Ascendiant ) relating to the offering of stock pursuant to an effective shelf registration statement. Under the placement agency agreement, Ascendiant agreed to act as our lead placement agent in connection with the issuance and sale of our common stock and warrants to purchase shares of common stock, on a best efforts basis, to certain institutional investors. Under this agreement and related

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purchase agreements with the investors, we sold 4,916,667 shares of our common stock and 983,333 warrants for net proceeds of approximately $7.2 million.

At December 31, 2006, we had approximately $25.2 million in cash and short-term investments. This compares to our use of approximately $38.4 million in cash in our operating activities in the year ended December 31, 2006. Although we believe we have adequate resources to enable us to operate the business through the end of 2007, due to our negative cash flows from operations we remain dependent on capital financing or other non dilutive sources, such as debt or research and development funding, to continue supporting operations subsequent to December 31, 2007 through the time we attain cash flow positive results. We can not provide you assurance that we will be able to obtain new sources of financings when and as needed in the future to bridge the gap between our current resources and the cash flow breakeven point.

**Our business:**

Our company is based on the vision of providing a higher quality of healthcare through advanced diagnostic products. Our business strategy is to assemble the companies, products and knowledge base to become a leading supplier of the technologies and products that will help drive a new era of personalized medicine. We were early to recognize that the adoption of personalized medicine is dependent on the advancement of diagnostic technologies. The commercialization of our products and technologies will help bridge the gap between early-stage scientific research and actual clinical practice. We are developing several product lines that are directly targeting specific markets within the advanced diagnostics field that have significant potential for revenue growth. We see successes and a growing capability in the clinical laboratories ability to perform accurate advanced diagnostic testing as a strong validation of our strategy. In addition, the FDA has released guidance encouraging the generation of more pharmacogenomics data and molecular diagnostic testing during drug development and clinical trials, and before the use of medications. We believe these applications of advanced diagnostics will help build demand for our products and technologies.

*Technology*

Our diagnostic technologies focus on the identification of the nucleic acid sequences, gene variations and gene expressions associated with both genetic conditions and infectious diseases. We believe that our research will contribute to a new healthcare paradigm where disease is diagnosed and understood at the molecular level. We believe that this will lead to the introduction of new therapies, targeted therapeutics and an abundance of new screening tests that will, in turn, shift the focus of medicine to be increasingly proactive as well as being increasingly specific to the individual patient. Our tests will provide doctors with the information they require to tailor specific therapies to the individual patient. Therefore, we have developed a variety of diagnostic tools for both the relatively simple and complex testing required to render disease-specific molecular information accessible to researchers and clinicians.

*License fee and royalty income: Developments*

In January 2006, we renegotiated our royalty agreement with Applied Biosystems, Inc. ( Applied Biosystems ), with the underlying patents expiring at various dates between 2010 and 2015, to maintain minimum quarterly payments through December 31, 2006 and royalties based on actual sales, thereafter. However, actual royalties exceeded the minimum guarantees and there are no longer any guaranteed minimum royalty payments from this agreement. Although we expect this relationship to continue for the foreseeable future, this agreement can be terminated by Applied Biosystems with a 180 day notice.

In September 2006, we entered into an agreement to assign certain rights associated with our Applied Biosystems royalty agreement from the period of July 2006 through December 2011 to Drug Royalty Trust ( DRT ) for an upfront payment of $20.0 million. Under the agreement, we have guaranteed minimum royalty payments from Applied Biosystems to DRT. If the royalty payments fall below certain minimums in a given fiscal year, we are required to pay cash to DRT for the difference between the actual royalty payments from

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Applied Biosystems and the minimums. In addition, if royalty payments from Applied Biosystems are above certain thresholds for a given calendar year we will receive, in cash, a certain percentage of the amount above the threshold. The table below illustrates the minimum undiscounted payment to DRT guaranteed by us for each remaining fiscal year:

| Calendar year ending | Minimum payment (in thousands) |
|---|---|
| 2007 | 4,300 |
| 2008 | 4,820 |
| 2009 | 5,200 |
| 2010 | 5,410 |
| 2011 | 5,374 |
| Total | $ 25,104 |

*Acquisitions, investments and goodwill: Developments*

We actively and selectively seek to acquire or invest in companies with complementary products and strong intellectual property positions to allow us to penetrate emerging markets. We anticipate using a combination of cash and common stock to purchase future companies or assets.

*Spectral Diagnostics Inc. asset purchase*

On February 6, 2006, we completed the acquisition of the rapid cardiac immunoassay test business from Spectral Diagnostics Inc. ( Spectral ) for cash of approximately $4.8 million and 975,193 shares of our common stock with a fair value of approximately $2.9 million.

Based in Toronto, Canada, the rapid cardiac immunoassay test business includes a portfolio of point-of-care tests such as the Cardiac STATus® and Decision Point product lines, the i-Lynx reader, related intellectual property and manufacturing capabilities. This acquisition provided us a fully integrated point-of-care group with resources and capabilities in manufacturing, and sales and marketing with a worldwide distribution network to compete in the point-of-care market.

*Amplimedical asset purchase*

On May 1, 2006, we completed the acquisition of the diagnostics division of Amplimedical S.P.A. ( Amplimedical ), which is a manufacturer and distributor of molecular diagnostic products, based in Italy, for approximately $9.9 million consisting of a $2.1 million payable secured by a letter of credit securitized by restricted cash, the issuance of a $6.9 million promissory note that was convertible into our common stock, and $0.9 million in transaction costs. On June 30, 2006, we paid the promissory note in full by issuing Amplimedical 2,886,935 shares of our common stock at a $2.63 per share conversion price and incurred no interest charges. Under our asset purchase agreement we had the option to pay the promissory note with cash at a 10% discount through June 30, 2006. As such, we reduced the fair value of the promissory note by 10% when we calculated the purchase price. These factors were among those that contributed to a purchase price resulting in the preliminary allocation of $722,000 in goodwill.

Based in Italy, Amplimedical has been active in the European and other markets since the early 1990s with its molecular diagnostic reagents. Nanogen and Amplimedical have shared a strong business relationship for approximately five years, during which time Amplimedical has been a distributor of Nanogen s NanoChip® Molecular Biology Workstation and NanoChip® 400 instrument systems in Italy. We believe this acquisition will allow our molecular diagnostics business to further expand in Europe by providing additional resources and scale. Amplimedical s portfolio of real-time molecular diagnostic test kits are all CE marked for in vitro diagnostics. Amplimedical s diagnostic test kits also include multiplexed reagent kits, sold in Europe, such as the

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CE/IVD-marked set of reagents used to detect mutations in the GJB2 gene for the diagnosis of hereditary deafness and a research-use-only set of reagents to test for genetic causes of beta thalassemia, a type of inherited blood disorder that can cause anemia.

*Acquisition of SynX Pharma Inc. and Epoch Biosciences, Inc.*

As a part of our long-term strategy to build a stronger company with products to serve the advanced diagnostic marketplace, in 2004, we identified SynX Pharma Inc. ( SynX ) and Epoch Biosciences, Inc. ( Epoch ) as businesses operating in market niches that were complementary to our existing business. In addition, they provided us the opportunity to broaden our product lines in the proteomics technology pipeline (e.g. point-of-care) and real-time PCR diagnostic markets. Therefore, we acquired SynX and Epoch in all stock transactions on April 21, 2004 and December 16, 2004, respectively.

*Jurilab, LTD investment*

In a series of investments from July 2005 through June 2006, we invested approximately $3.0 million to purchase 29.7% of the outstanding stock of Jurilab LTD ( Jurilab ). In addition, we have the option to purchase the entire company at not-to-exceed prices through December 31, 2007. By investing in Jurilab, a development stage research and development company, we gained access to technologies related to certain gene markers. We believe that this investment strategy is an effective use of our cash because it provides us approximately two years to evaluate Jurilab s technology for potential commercialization and integration into our product lines before we commit to purchasing the entire entity.

In May 2006, we entered into a collaboration agreement with Jurilab, where Jurilab would identify and validate new prognostic markers for Type II diabetes with certain milestone payments of up to approximately $1.2 million. Through December 31, 2006, we paid Jurilab approximately $715,000 for the completion of certain milestones.

*Pharmacogenetics Diagnostic Laboratory, LLC*

Beginning in July 2005, we made a series of investments in Pharmacogenetics Diagnostic Laboratory, LLC ( PGx ), a development stage research and development company, to provide us access to certain technologies related to pharmacogenetics. As of December 31, 2006, these investments totaled $500,000. Our investment, which is carried as other long-term assets, is expensed to research and development based on the losses incurred at PGx. Once our investment is reduced to zero, we will stop recording the results of operations of PGx in our financials. We believe this appropriately reflects the substance of this transaction, which is to fund research and development. For the year ended December 31, 2006 and 2005 we have expensed $154,000 and $125,000, respectively, of PGx s net losses into research and development.

*Research and Development Arrangements with Fisher Scientific International Inc.*

On August 3, 2006, we entered into research and development collaboration arrangements with Fisher Scientific International Inc., ( Fisher Scientific ) a related party, that owns approximately 5.7 million shares of our common stock, and Athena Diagnostic, a wholly-owned subsidiary of Fisher Scientific. We agreed to share certain technology and patent rights related to the development, manufacture and marketing of new molecular diagnostic products. Under these arrangements, Fisher Scientific has the option to provide us with up to $10 million in 2007 and 2008 for the research and development of infectious disease and molecular diagnostic tests that will be mutually agreed upon. These arrangements are included in non-binding general agreements, thus the obligation of the parties are subject to further negotiation and final terms of definitive collaboration agreements. On August 9, 2006, we entered into an exclusive distribution agreement with Fisher Scientific whereby they become the exclusive distributor of our Nanogen s MGB Alert real-time polymerase chain reaction (PCR) products in the United States. Fisher will have exclusive rights to sell and distribute the products to clinical laboratories. We recorded approximately $42,000 of sales under this agreement in the year ended December 31, 2006.

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*FasTraQ, Inc.*

In June 2005, we signed a letter of agreement with FasTraQ, Inc. ( FasTraQ ) for the development of a certain future product. Our Chief Executive Officer and Chairman of the Board, Mr. Birndorf, is a director and an investor in FasTraQ and our newest director, Dr. Heiner Dreismann, became the CEO of FasTraQ in 2006. In October and December 2005 we amended this letter of agreement. As a result of this agreement and related amendments we made an initial non-refundable payment of $500,000 in 2005 to begin the initial development of this product. As of December 31, 2005 we expensed the initial $500,000. In February 2006, we converted this letter of agreement into two executed contracts, a Development and License Agreement and a Collaboration Agreement. In February 2006, we committed to provide FasTraQ an additional $500,000 in funding based on certain milestones. As of December 31, 2006, $200,000 of this incremental commitment had been paid and expensed to research and development.

***Development and manufacturing agreement with Princeton BioMeditech Corporation ( PBM ): Developments***

We were a party to a 2001 development and manufacturing agreement between SynX and Princeton BioMeditech Corporation ( PBM ) to jointly develop and market various point-of-care tests for certain biomarkers and protein targets. In the year ended December 31, 2006, we terminated all of our previous agreements with PBM and superseded them with renegotiated manufacturing, distribution agreement and a development contract. These renegotiated contracts did not include any payments or minimum purchase requirements between the parties.

We agreed to continue the joint development of a point-of-care test that incorporates PBM s proprietary technology, our proprietary reagents and an exclusive license between us and Roche Diagnostics GmbH. PBM is responsible for the development of a reasonably priced instrument for this test to determine the amount of target NT-proBNP present in a patient. We will fund a portion of the development cost of the instrument, up to an agreed upon maximum amount which is not material to our financials. In addition, we are required to develop and manufacture the reagents used in the instrument and supply them to PBM. We also have to conduct the testing of our reagents required to obtain regulatory approval to market and sell them. Further, we will share revenues associated with this point-of-care instrument with the majority of revenues being allocated to the party responsible for selling, marketing and distributing the instrument within a specific geographic territory. Each party will be responsible for its own manufacturing, sales and marketing expenses and both parties are required to provide each other a forecast of expected demand for each others product (reagents or instruments).

We provided PBM with an option to purchase or to receive a nonexclusive license for certain biological markers for the incorporation into a future point-of-care instrument related to congestive heart failure, stroke or traumatic brain injury. We have agreed to negotiate in good faith commercially reasonable terms for such a license or supply arrangement. However, if we are unable to agree upon such terms PBM will pay Nanogen a certain royalty for use of these markers.

***Acquisitions, investments and goodwill: Developments***

We actively and selectively seek to acquire or invest in companies with complementary products and strong intellectual property positions to allow us to penetrate emerging markets. We anticipate using a combination of cash and common stock to purchase future companies or assets.

***Other:***

***FDA regulations: Developments***

Our micro-array instrumentation and ASR products are to be used only for research purposes or by CLIA-certified laboratories when developing and validating their own diagnostic tests. When we begin to distribute and

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manufacture products for non-CLIA laboratories and point-of-care customers, we are subject to additional FDA requirements such as pre-market applications.

In March 2006, we received FDA clearance to begin marketing our NT-proBNP congestive heart failure product for use with human plasma. For the larger point-of-care market, our NT-proBNP congestive heart failure product for use with human whole blood remains under development.

In the third quarter of 2005, we received an untitled letter from the Office of In Vitro Diagnostic Devise Evaluation and Safety (OIVD), a division of the FDA. The letter described the OIVD s concerns that our microarray NanoChip® systems and certain related ASRs might be construed as a medical device that requires a premarket notification/application. During the first quarter of 2006 we met with the FDA and made certain changes in our marketing materials and sales approach. In September 2006, the FDA published Draft Guidance for Industry and FDA Staff: Commercially Distributed Analyte Specific Reagents (ASRs): Frequently Asked Questions setting forth the FDA s interpretation of the regulations governing the sale of ASR products. Subsequently, we received a second letter from the OIVD in which the FDA asserted that our microarray and multiplexed reagents require FDA pre-market review. In November 2006, we met with the FDA to discuss the second letter. We believe that our microarray NanoChip® systems and ASR products are not subject to FDA premarket review. If there is an unfavorable decision by the FDA in these matters, it could delay or prevent sales of our NanoChip®400 to clinical laboratories in the United States and could adversely impact sales of our ASRs to clinical laboratories in the United States. During 2007, we plan to submit the NanoChip®400 with one or more assays to the FDA for clearance.

*Manufacturing:*

Except for our custom real time PCR products and specialized manufacturing production businesses, which are make-to-order businesses, we principally manufacture products for inventory and ship products shortly after the receipt of orders, and anticipate that we will continue to do so in the future. We do not currently have a significant backlog and do not anticipate we will develop a material backlog in the near future. In addition, we rely on third-party manufacturers to supply many of our raw materials, product components, and in some cases, entire products.

Hitachi manufactures our NanoChip® systems and we manufacture the majority of our consumable products in our manufacturing facilities in San Diego, California and Bothell, Washington.

In February 2006, we purchased an advanced diagnostic product line from Spectral and acquired the ability to manufacture the associated products in our facilities in Toronto, Canada.

In May 2006, we purchased an advanced diagnostic product line from Amplimedical and acquired the ability to manufacture the associated products in our facilities in Buttigliera, Italy.

*Fluctuations:*

We anticipate that our results of operations will fluctuate on a quarterly and annual basis and will be difficult to predict. The timing and degree of fluctuations will depend upon several factors, including those discussed under Item 1A-Risk Factors. In addition, the timing of orders from distributors and the mix of sales between our product lines could affect our results of operations. We cannot assure you that we will be able to achieve revenue growth on a quarterly or annual basis.

**Critical Accounting Policies and Estimates**

Our discussion and analysis of our results of operations and liquidity and capital resources are based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally

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accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates and judgments, including those related to revenue recognition, valuation of inventory, intangible assets and investments, and litigation. We base our estimates on historical and anticipated results and trends and on various other assumptions that we believe are reasonable under the circumstances, including assumptions as to future events. These estimates form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. By their nature, estimates are subject to an inherent degree of uncertainty. Actual results that differ from our estimates could have a significant adverse effect on our operating results and financial position. We consider an accounting estimate and policy to be critical if: 1) the accounting estimate requires us to make assumptions about matters that were highly uncertain at the time the accounting estimate was made, and 2) changes in the estimate that are reasonably likely to occur from period to period, or the use of different estimates that we reasonably could have used in the current period, would have a material impact on our financial condition or results of operations. We believe that the following critical accounting policies and assumptions may involve a higher degree of judgment and complexity than others.

*Valuation of Goodwill*

We have $39.0 million of goodwill on our December 31, 2006 consolidated balance sheet related to our acquisitions of Amplimedical and Spectral in 2006, and our acquisitions of SynX and Epoch in 2004. We used significant estimates and assumptions to determine the value of these assets. In many cases we use a third party to perform a valuation analysis on these assets, while we review their assumptions, calculations and conclusions for reasonableness and accuracy.

We test goodwill for possible impairment on an annual basis. This testing requires that we make judgments to identify our reporting units and requires significant judgments and directly impacts our valuation analysis. In addition, we test goodwill for possible impairment if events occur or circumstances indicate that the carrying amount of goodwill may not be recoverable. We assess potential impairments to goodwill assets when there is evidence that events or circumstances indicate that the recorded value of an asset (the carrying amount) may not be recovered. These assessments are based on judgments and estimates of the materiality of various on-going events and circumstances related to the asset. Indicators of impairment may include, but are not limited to:

- a significant adverse change in legal factors or in the business climate;
- a significant decline in our stock price or the stock price of comparable companies;
- a significant decline in our projected revenue or earnings growth or cash flows;
- an adverse action or assessment by a regulator;
- unanticipated competition;
- a loss of key personnel; and
- a more-likely-than-not expectation that a reporting unit or a significant portion of a reporting unit will be sold or otherwise disposed of.

The estimates and assumptions we use are consistent with our internal planning and there are inherent uncertainties in this assessment process as it is difficult to model all possible future events. If these estimates or their related assumptions change in the future, we may be required to record an impairment charge on all or a portion of our goodwill or intangible assets. Any resulting impairment loss could have an adverse impact on our results of operations.

*Valuation of intangible and other long-lived assets.*

We assess the carrying value of intangible and other long-lived assets each quarter, which requires us to make assumptions and judgments regarding the future cash flows of these assets. The assets are considered to be

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impaired if we determine that the carrying value may not be recoverable based upon our assessment of the following events or changes in circumstances such as:

- the asset s ability to continue to generate income from operations and positive cash flow in future periods;
- loss of legal ownership or title to the asset;
- significant changes in our strategic business objectives and utilization of the asset(s); and
- the impact of significant negative industry or economic trends.

If the assets are considered to be impaired, the impairment we recognize is the amount by which the carrying value of the assets exceeds the fair value of the assets. In addition, we base the useful lives and related amortization or depreciation expense on our estimate of the period that the assets will generate revenues or otherwise be used by us. We also periodically review the lives assigned to our intangible assets to ensure that our initial estimates do not exceed any revised estimated periods from which we expect to realize cash flows from the technologies. If a change were to occur in any of the above-mentioned factors or estimates, the likelihood of a material change in our reported results would increase.

*Revenue Recognition*

We recognize revenue principally from various real-time PCR products (both custom and proprietary tests), molecular testing platforms (the NanoChip® systems), various ASRs, cardiac tests, sponsored research, contract and grant agreements and from license and royalty fees for intellectual property. Each element of revenue recognition requires a certain amount of judgment to determine if the following criteria have been met: i) persuasive evidence of an arrangement exists; ii) delivery has occurred or services have been rendered; iii) the seller s price to the buyer is fixed or determinable; iv) collectibility is reasonably assured, and v) both title and the risks and rewards of ownership are transferred to the buyer. We are required to make more significant estimates involving our recognition of revenue from license and royalty fees, than from revenue generated from our products sales and contracts and grant agreements. Our license and royalty fees revenue estimates depend upon on our interpretation of the specific terms of each individual arrangement and our judgment to determine if the arrangement has more than one deliverable and how each of these deliverables should be measured and allocated to revenue. In addition, we have to make significant estimates about the useful life of the technology transferred to determine when the risk and rewards of ownership have transferred to the buyer to decide the period of time to recognize revenue. In certain circumstances we are required to make judgments about the reliability of third party sales information and recognition of royalty revenue before actual cash payments for these royalties have been received.

*Inventory and related reserves*

We have a history of writing down the value of our inventory due to lack of market demand. We have approximately $4.9 million of inventory reserves as of December 31, 2006, with a net ending inventory balance of approximately $7.7 million. Given the inherent unpredictability of demand for new product lines, we were required to make significant estimates about the future demand for this inventory. Our estimates of realizable value are based upon our analysis and assumptions including, but not limited to, forecasted sales levels by product, expected product lifecycle, product development plans and future demand requirements. If actual market conditions are less favorable than our forecasts or actual demand from our customers is lower than our estimates, we may be required to record additional inventory write downs. If actual market conditions are more favorable than anticipated, inventory previously written down may be sold, resulting in lower cost of sales and higher income from operations than expected in that period.

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*Variable Interest Entities*

We provide various forms of funding into other entities for business purposes. Examples of these include our investments into Jurilab, FasTraq and PGx. FIN46R, *Consolidation of Variable Interest Entities*, requires that we make significant assumptions about these entities ability to generate unrelated additional capital funding and/or revenues. In addition, we are required to make assumptions about the intentions of unrelated parties initial and potential future investments to determine if we are required to consolidate or de-consolidate these entities. If any of these facts, circumstances or assumptions change in the future we maybe required to consolidate or de-consolidate these entities operations.

*Share-Based Compensation*

Share-based compensation expense is significant to our financial position and results of operations, even though no cash is used for such expense. In determining the period expense associated with unvested options, we estimate the fair value of each option at the date of grant. We believe it is important for investors to be aware of the high degree of subjectivity involved when using option pricing models to estimate share-based compensation under SFAS No. 123R. The determination of the fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of complex and subjective variables. These variables include, but are not limited to, our valuation methodology, the expected term, expected stock price volatility over the term of the awards, the risk-free interest rate, expected dividends and pre-vesting forfeitures. If any one of these factors changes and we employ different assumptions in the application of SFAS No. 123R in future periods, the compensation expense that we record under SFAS No. 123R will differ significantly from what we have recorded in the current period.

For share-based awards issued during the year ended December 31, 2006, we estimated the expected term by considering various factors including the vesting period of options granted, employees historical exercise and post-employment termination behavior and aggregation by homogeneous employee groups. Our estimated volatility was derived using our historical stock price volatility. We have never declared or paid any cash dividends on our common stock and currently do not anticipate paying such cash dividends. The risk-free interest rate is based upon U.S. Treasury securities with remaining terms similar to the expected term of the share-based awards.

**Results of Operations**

***Years ended December 31, 2006, 2005 and 2004***

Revenues

The following table summarizes our revenues for the years ended December 31, 2006, 2005 and 2004 (in thousands):

| | Year ended December 31, | | | Year ended December 31, | | |
|---|---|---|---|---|---|---|
| | **2006** | **2005** | **Difference** | **2005** | **2004** | **Difference** |
| Product sales | $ 15,996 | $ 4,544 | $ 11,452 | $ 4,544 | $ 2,690 | $ 1,854 |
| License fee and royalty income | 7,908 | 6,530 | 1,378 | 6,530 | 490 | 6,040 |
| Sponsored research | | | | | 500 | (500) |
| Contracts and grants | 2,948 | 1,470 | 1,478 | 1,470 | 1,694 | (224) |
| Total | $ 26,852 | $ 12,544 | $ 14,308 | $ 12,544 | $ 5,374 | $ 7,170 |

Product sales revenue is primarily generated from the sales of advanced diagnostic instruments and various diagnostic products. The increase in product sales revenue in the year ended December 31, 2006 as compared to the same period in 2005 is due primarily to the acquisitions of Spectral s and Amplimedical s product lines on February 6, 2006 and May 1, 2006, respectively. Sales revenue grew in 2005 as compared to 2004 due primarily to the acquisition of Epoch s product lines in December 2004.

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*The future*: Due to the acquisition of Spectral s and Amplimedical s product lines we expect revenue to continue to increase in 2007 as compared to 2006 when we record a full year of sales revenue for these product lines. In addition to this acquired revenue, we expect increases in revenue from our advance diagnostic instruments and our internally developed diagnostic products. However, this maybe impacted by the U.S. FDA requiring regulatory clearance for certain of our reagents.

We do not expect any significant revenue from our initial plasma based NT-proBNP congestive heart failure test, that received a 510(k) clearance from the FDA in 2006. The whole blood congestive heart failure test, which remains in development, will significantly expand the potential market and revenue generating capability of the product if cleared with the FDA.

License fee and royalty revenue is generated by licensing our intellectual property rights to third parties. In the years ended December 31, 2006 and 2005 the majority of our license fee and royalty revenue was related to our royalty minimums under a licensing agreement with Applied Biosystems Inc. (Applied Biosystems) for the TaqMan® 5 -nuclease real-time PCR. The increase in license fees and royalty revenue in the year ended December 31, 2006 as compared to the same period in 2005 was due to renegotiating our licensing agreement with Applied Biosystems to increase our minimum royalties. License fees and royalty income increased in 2005 as compared to 2004 due to recognizing a full year of royalty revenue after acquiring the Applied Biosystems licensing agreement in the December 2004 acquisition of Epoch.

*The future*: After December 31, 2006, future royalties from Applied Biosystems will be based on actual sales. From our review of the sales trends of products under this license agreement, we expect that future royalty revenue will remain at similar levels as seen in 2006; however, license revenue under the same agreement ended and therefore the overall revenue stream from Applied Biosystems is expected to decrease in 2007. On September 29, 2006, we entered into an agreement with Drug Royalty Trust ( DRT ) where we assigned the rights associated with this royalty agreement from July 2006 through December 2011 to DRT for a $20.0 million upfront payment in cash. Going forward we will not receive any cash from this license agreement until 2012 unless actual sales exceed certain annually agreed upon thresholds. We recognized this payment as assigned royalty interests obligation and will continue to recognize revenue quarterly based on actual royalties under the Applied Biosystems agreement. We will amortize the assigned royalty interests under the DRT agreement quarterly through December 2011.

Although we expect our relationship with Applied Biosystems to continue for the foreseeable future, this contract may be terminated by Applied Biosystems with a 180 day notice.

In addition, with our growing intellectual property profile of 171 U.S. patents and with our relationship with Jurilab, LTD, we are continuing to evaluate royalty and licensing opportunities and we may choose to license other intellectual property in the future, if we believe the terms and conditions are acceptable.

Sponsored research revenue is nonrefundable money generated through the development agreement with Hitachi. The decrease in sponsored research revenue directly relates to the termination of the Hitachi collaborative research agreement in August 2003. Funding through this agreement was completed in the second quarter of 2004.

*The future*: With the termination of our sponsored research agreement with Hitachi completed in the second quarter of 2004 we do not expect any revenue from Hitachi in the future.

Contracts and grants revenue is nonrefundable payments by various federal, state and private agencies for our research and development efforts awarded through contracts and grants. Contracts and grants revenue is recorded as the costs and expenses to perform the research are incurred, if the amount is reasonably commensurate with the effort expended and collection of the payment is reasonably assured. Under certain arrangements where funding is provided contractually on a scheduled basis, revenue is recorded ratably over the term of the arrangement. Payments received in advance under these arrangements are recorded as deferred revenue until the expenses are incurred. The increase in contract and grant revenue in 2006 as compared to 2005 was primarily related to additional revenue generated

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from a research and development agreements we entered into with a private entity in July 2006 and a full year of receiving the Bill and Melinda Gate Foundation grant. The decrease in contract and grant revenue in 2005 as compared to 2004 primarily related to revenue generated in 2005 from a Bill and Melinda Gates Foundation grant and two new NIH grants not offsetting the winding down of several contracts entered into in previous years.

*The future:* The recognition of revenue under contracts and grants may vary from quarter to quarter and may result in significant fluctuations in operating results from year to year depending on the timing and quantity of agreements and contracts. On December 4, 2006 we announced we were awarded a $4.5 million contract from the U.S. Centers for Disease Control and Prevention (CDC). The current award is for the first two phases of a five-phase development project. If we are awarded all five phases, the award may total approximately $12.5 million over the next two to three years.

Cost and expenses

*Cost of product sales (in thousands):*

| | Year ended December 31, | | | Year ended December 31, | | |
|---|---|---|---|---|---|---|
| | 2006 | 2005 | Difference | 2005 | 2004 | Difference |
| Cost of product sales | $ 13,290 | $ 4,518 | $ 8,772 | $ 4,518 | $ 5,642 | $ (1,124) |

Cost of product sales relates to the expenses associated with manufacturing our products. These expenses include the materials, labor, and various overhead costs required to build our products. Included in our overhead expenses are charges for excess capacity. In 2006, 2005 and 2004 the cost of product sales related to the cost of manufacturing of advanced diagnostic instruments (the second generation molecular testing platforms) and various diagnostic products (real-time PCR products and ASR test suites). The increase in the cost of product sales in 2006 as compared to the same period in 2005 primarily related to increased product sales arising from the acquisition of the Spectral and Amplimedical product line related manufacturing costs with no comparable expenses in 2005. The Spectral and Amplimedical product lines accounted for $2.6 million and $3.8 million, respectively, of the increase in the cost of product sales as compared to the same periods in 2005. In addition, following the commercial launch of the second generation molecular testing platform, in late 2005, we incurred additional overhead charges related to the conversion of a significant portion of our product development facilities to a manufacturing and assembly facility. This was reflected in approximately $2.0 million in excess capacity charges in 2006 as compared to 2005 when these overhead charges were expensed into research and development. The decrease in cost of product sales in 2005 as compared to 2004 related to a $3.7 million inventory reserve expense in 2004. Without this inventory reserve expense the cost of product sales would have increased in 2005 as compared to 2004. This increase related to incurring a full year of manufacturing cost for real-time ASRs that were acquired in our December 2004 Epoch acquisition.

As of December 31, 2006, 2005 and 2004 we had inventory reserves of $4.9 million, $5.4 million and $5.9 million, respectively, that primarily related to our first generation molecular testing system, the Molecular Biology Workstation. This inventory reserve was accumulated throughout 2004 and 2003. In 2006, we did not sell any inventory out of this reserve; however, in December 2006 we determined that the reserve as originally recorded exceeded the carrying value of the related inventory. As a result, we reversed the reserve related to our first generation instrument by approximately $0.8 million; we also determined that we were under-reserved on our point-of-care inventory and took an additional charge of approximately $0.3 million. The net of these two items was a $0.5 million reserve reduction that lowered cost of goods sold during the fourth quarter of 2006. In 2005, we sold approximately $223,000 of first generation molecular testing systems that had been fully reserved.

*The future.* In 2007 we expect our cost of product sales to increase as compared to 2006 as we include a full year of Spectral s and Amplimedical s product sales and related manufacturing costs. We also expect to

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continue to incur excess production capacity within our manufacturing facilities while we work to build demand for our advanced diagnostic instruments and various diagnostic products. In addition, our second generation molecular testing system has a lower selling price per unit; therefore, our gross margins depend on the number of units sold or rented and the number of higher margin test kits we are able to sell to absorb our fixed overhead costs.

*Research and development expenses (in thousands):*

| | Year ended December 31, | | | Year ended December 31, | | |
|---|---|---|---|---|---|---|
| | 2006 | 2005 | Difference | 2005 | 2004 | Difference |
| Research and development | $ 25,683 | $ 22,033 | $ 3,650 | $ 22,033 | $ 18,117 | $ 3,916 |

Research and development relates to the expenses associated with our efforts to develop advance molecular diagnostics products for commercialization and the expenses incurred while conducting reimbursable research and development under contractual agreements with various federal, state and private entities. The increase in research and development costs in 2006 as compared to the same period in 2005 related to $641,000 in additional research and development activities acquired after our acquisition of Spectral and Amplimedical, $2.0 million in additional research activities related to consolidating our minority interest in Jurilab for a full year in 2006, and $1.1 million in non-cash stock base compensation expenses with no comparable expenses in 2005. The increase in 2005 as compared to 2004 primarily related to our decision to continue to fund on-going research and development projects at Synx and Epoch that were acquired in April and December 2004, respectively. In addition, we incurred approximately $1.9 million of research and development costs associated with the September 2005 investment and subsequent consolidation of Jurilab LTD (a variable interest entity).

*The future.* As a part of our continual focus on narrowing our losses and working towards positive cash flows from operations, we plan to reduce costs in research and development expenditures that are not funded by contracts or grants.

*Selling, general and administrative expenses (in thousands):*

| | Year ended December 31, | | | Year ended December 31, | | |
|---|---|---|---|---|---|---|
| | 2006 | 2005 | Difference | 2005 | 2004 | Difference |
| Selling, general and administrative | $ 33,385 | $ 23,578 | $ 9,807 | $ 23,578 | $ 18,232 | $ 5,346 |

Selling, general and administrative expenses relates to the costs associated with promoting and selling our products and the administrative costs required to support our operations. The increase in expenses in 2006 as compared to 2005 included an additional $4.7 million for the on-going operational costs associated with Spectral and Amplimedical and $2.6 million in non-cash stock based compensation with no comparable charges in 2005. The increase in 2005 selling, general and administrative expenses as compared to 2004 primarily related to $3.9 million in additional expenses due to incurring a full year of SynX and Epoch s selling and administrative costs. In addition, we incurred an additional $1.2 million for selling and marketing expenses as compared to 2004 that was primarily related to the release of our second generation molecular testing system and the anticipated release of several new products.

*The future.* We expect that our selling, general and administrative expenditures on a percentage basis will trend lower than the increases in our revenue. On a consolidated basis, we expect to achieve significant synergies and savings by consolidating many of the general and administrative functions. The savings from consolidation of general and administrative activities are expected to be offset by increased sales and marketing expenses required to support our larger number product lines. Expenses may also be further impacted by potential future business combinations or corporate development transactions.

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*Charges for goodwill, acquired in-process research and development & impairment for acquired technology (in thousands):*

| | Year ended December 31, | | | Year ended December 31, | | |
|---|---|---|---|---|---|---|
| | 2006 | 2005 | Difference | 2005 | 2004 | Difference |
| Impairment charge on goodwill | $ | $ 59,000 | $ (59,000) | $ 59,000 | $ | $ 59,000 |
| Charge for acquired in-process research and development | $ | $ | $ | $ | $ 3,758 | $ (3,758) |
| Amortization of purchased intangible assets | $ 2,987 | $ 1,571 | $ 1,416 | $ 1,571 | $ | $ 1,517 |

Goodwill is created using the purchase method of accounting for acquisitions and it represents the difference between the acquisition price and the fair value of the identifiable tangible and intangible assets. In 2004, we recognized $85.6 million and $10.5 million in goodwill assets related to our purchases of Epoch and SynX, respectively. In 2005, using the prescribed methodology of SFAS 142, we determined that the fair value of the reporting unit related to Epoch was approximately $26.6 million. Therefore, we incurred a non-cash impairment charge to our goodwill of $59.0 million. In 2006, we recognized $1.4 million and $0.7 million in goodwill assets related to our purchases of Spectral and Amplimedical, respectively.

*The future.* Annually, we assess potential impairments to goodwill when there is evidence that events or circumstances indicate that the recorded value of an asset (the carrying amount) may not be recovered. These assessments are based on estimates of the materiality of various on-going events and circumstances related to the goodwill asset. Indicators of impairment maybe the assets inability to meet prior revenue estimates, inconsistent operational performance, lack of future potential, or other factors. As of December 31, 2006 we believe we have recorded the fair value of our goodwill on our balance sheet. However, it is difficult to model all possible future events and if these estimates or their related assumptions change in the future, we may be required to record an impairment charge on all or a portion of our remaining goodwill.

We incurred a non-cash charge of $3.8 million related to the expensing of acquired in-process research and development ( IPR&D ), related to the SynX acquisition in 2004. The IPR&D asset was expensed at the date of acquisition in accordance with FASB Interpretation No. 4 *Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method.* The estimated fair value of $3.8 million in IPR&D expense was related to $2.7 million for congestive heart failure (CHF), $504,000 for traumatic brain injury (TBI) and $577,000 for diabetes diagnostic products. These products as of the acquisition date in April 2004, had not reached technological feasibility and had no alternative future uses.

*The future*. The development of these diagnostic products is subject to a number of risks, including development, regulatory and marketing risks. As of December 31, 2006 none of these products has been commercialized; however, our CHF product is closest to commercialization. We do not currently have a schedule for the commercialization of the TBI or diabetes diagnostic products. The primary risk associated with not completing this technology, as anticipated, is the delay in recovery or non-recovery of our investment in this area of research and development. We do not expect to incur any additional charges for acquired IPR&D related to the SynX or Epoch acquisitions. However, if we acquire other companies in the future, we may incur additional material IPR&D expenses. Additional costs associated with the completion of IPR&D projects are recorded as research and development expenses in the period incurred.

Amortization of purchased intangibles is our effort to match the benefits of the intellectual property we have acquired with current period expenses. The increase in the amortization of purchased intangible assets in 2006 compared to 2005 related to the amortization of $11.1 million in acquired identifiable intangible assets when we purchased Spectral s and Amplimedical s assets in 2006. The increase in 2005 as compared 2004 related to the amortization of $10.6 million in acquired technology intangible assets when we purchase Epoch in December 2004.

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*The future.* We expect amortization expense to remain consistent at its current level for the remainder of the year. However, amortization expense may also be impacted by potential future business combinations or our periodic impairment evaluations.

Other income

The following table summarizes our other income for the years ended December 31, 2006, 2005 and 2004 (in thousands):

| | Year ended December 31, | | | Year ended December 31, | | |
|---|---|---|---|---|---|---|
| | 2006 | 2005 | Difference | 2005 | 2004 | Difference |
| Interest income | $ 1,046 | $ 1408 | $ (362) | $ 1408 | $ 926 | $ 482 |
| Interest expense | (1,292) | (544) | (748) | (544) | (409) | (135) |
| Other expense | (468) | (78) | (390) | (78) | (221) | 143 |
| Warrant valuation adjustment | 75 | 1,026 | (951) | 1,026 | (74) | 1,100 |
| Provision for income tax | (249) | | (249) | | | |
| Gain (loss) on sale of investments | | | | | (47) | 47 |
| Gain (loss) on foreign currency | 311 | 17 | 294 | 17 | 1,293 | (1,276) |
| Total other income | $ (577) | $ 1,829 | $ (2,406) | $ 1,829 | $ 1,468 | $ 361 |

*Interest income*

Interest income relates to the interest we receive on our cash, cash equivalents, and short-term investments. Our interest income is primarily influenced by the average balances held in our cash, cash equivalent and short-term investment accounts. An additional, less significant, factor causing fluctuations in our interest income is the interest rate yield, which has trended up in the periods presented.

*Interest expense*

Interest expense increased in 2006 as compared to 2005 primarily due to us assigning certain rights associated with a royalty agreement with Applied Biosystems to DRT through 2011 for a $20.0 million upfront payment in cash. We guaranteed DRT a minimum of $25.1 million in royalty revenue through 2011. Using an implied interest rate of 11.3% we incurred approximately $567,000 in interest expense with no comparable expenses in 2005. In addition, we recorded revenues from Applied Biosystems in excess of our minimum obligations due to DRT. The increased revenue from Applied Biosystems has been assigned to DRT, and as a result, we incurred an additional $228,000 in interest expense payable to DRT. In 2005 and 2004, interest expense primarily related to long-term obligations secured by our property and equipment.

*Warrant valuation adjustment*

As a result of our December 2004 acquisition of Epoch, we assumed warrants for 381,317 shares of our common stock. The warrants have an exercise price of $8.32 per share and expire in early 2009. If there is a change of control of Nanogen, under certain circumstances the warrants have a provision that allows them to be redeemed for cash based on the Black-Sholes formula. However, the volatility variable in the Black-Sholes formula is limited to the lesser of 50% or our actual historical volatility. Using the methodology prescribed in EITF 00-19, *Accounting for Derivative Financial Instruments Indexed To, and Potentially Settled In a Company s Own Stock*, we recorded a current liability for the fair value of the cash redemption portion of the warrants. The liability was measured and recorded in accordance with the terms of the warrant agreements. The valuation of the warrants and the corresponding liability are re-measured quarterly until the warrants are exercised or expire.

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The decrease in the market price of our common stock and other changes in the Black-Scholes formula s variables from December 31, 2005 to December 31, 2006 resulted in a $75,000 decrease in the value of the warrants. Therefore, we reported $75,000 as a warrant valuation adjustment in our statement of operations for the year ended December 31, 2006. The decrease in the market price of our common stock and other changes in the Black-Scholes formula s variables from December 31, 2004 to December 31, 2005 resulted in a $1.0 million decrease in the value of the warrants. Therefore, we reported $1.0 million as a warrant valuation adjustment in our statement of operations for the year ended December 31, 2005.

*Provision for income tax*

We recorded a provision for income tax in 2006 due to foreign taxes related to our May 1, 2006 acquisition of Amplimedical.

*Gain on Foreign Currency*

In 2006, the gain of $311,000 in foreign currency transactions primarily related to our May 1, 2006 acquisition of Amplimedical s Italian assets and operations where we were required to hold certain Euro based investments as security for acquisition related payables. We recorded a gain as the value of the Euro based investments rose against the dollar. In 2004, we recognized $1.2 million of previously unrealized foreign currency translation gains. This related to our decision to discontinue all material business activities of Nanogen Recognomics GmbH in 2004.

**Liquidity and capital resources**

At December 31, 2006 we have cash and cash equivalents and short-term investments, available for sale of approximately $25.2 million. We expect that our existing capital resources, anticipated product revenues, license fees and contract and grant funding will be sufficient to support our planned operations, at least through the next twelve months. As we continue to consume cash and have quarterly net losses, we are required to make significant assumptions about our operating cash requirements and our ability to continue to raise capital to finance our on-going operations. We assume that we will have the ability to sell a sufficient amount of securities to investors to continue our strategy of expanding our product pipeline by acquiring companies or assets and supporting our on-going internal product development. Without access to this financing, on terms acceptable to us, we may have to curtail or cease operations and product development that will materially alter our current business strategy.

Cash provided by (used in) operating, investing and financing activities of the years ended December 31, 2006, 2005 and 2004 is as follows (in thousands):

| | December 31, 2006 | December 31, 2005 | December 31, 2004 |
|---|---|---|---|
| Net cash used in operating activities | $ (38,443) | $ (34,613) | $ (29,495) |
| Net cash provided by (used in) investing activities | $ (160) | $ 5,404 | $ (13,869) |
| Net cash provided by financing activities | $ 44,510 | $ 20,089 | $ 50,049 |

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*Short-term and long-term liquidity*

The following is a summary of our key liquidity measures as of December 31, 2006, 2005 and 2004 (in thousands):

| | December 31, 2006 | December 31, 2005 | December 31, 2004 |
|---|---|---|---|
| Total cash and cash equivalents and short-term investment, available for sale | $ 25,184 | $ 32,379 | $ 51,934 |
| Working capital | $ 20,621 | $ 30,651 | $ 44,999 |

Our cash and cash equivalents and short-term investments, available for sale and working capital has continued to decrease each year since December 31, 2004. This is primarily a result of cash receipts from revenues, capital financing, and the assignment of royalty rights not offsetting the cash used in our on-going research and business development efforts. In addition, we have been using cash to support the businesses we have acquired in 2006 and 2004. Going forward, we believe we can use less cash as we focus on cutting costs and work to increase sales revenue from our various product lines.

Going forward, due to our negative cash flows from operations we expect to remain dependent on equity financing or other sources of non-dilutive financing.

*Historic sources of finances:*

From inception to December 31, 2006, we have financed our operations primarily by:

- Issuing our stock and warrants
- Generating revenues
- Assignment of certain royalty interests to DRT
- Financing our trade receivables
- Obtained cash through our acquisition of Epoch
- Using proceeds from our litigation settlement with CombiMatrix
- Obtaining a modest amount of capital equipment long-term financing
- Reimbursement from federal, state and private agencies for certain research and development projects

*Financing activities*

In 2006, 2005 and 2004 due to our negative cash flows from operations we remained dependent on equity financing or other sources of non-dilutive financing to fund our operations.

*Significant equity financing activities in 2006, 2005, and 2004 included:*

We filed a shelf registration statement in June 2005 with the U.S. Securities and Exchange Commission (SEC) that allowed us to raise up to $60.0 million in equity financing transactions. On May 9, 2006, we filed a 462(b) registration statement with the SEC to increase our available funding under this shelf registration statement as of May 9, 2006 by approximately $4.0 million.

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The following table illustrates our financing under the June 2005 shelf registration statement:

| Date of Financing | Number of Shares | Issuance Share Price | Proceeds, Net (in million) |
|---|---|---|---|
| September, 2005 | 6.8 million shares | $2.94 | $18.8 |
| September, 2005 | 1.0 million warrants | $4.00 | |
| March, 2006 | 5.7 million shares | $2.65 | 15.0 |
| July, 2006 | 2.5 million shares | $1.58 | 3.9 |
| September, 2006 | 0.8 million shares | $1.80 | 1.5 |
| February, 2007 | 4.9 million shares | $1.54 | 7.2 |
| February, 2007 | 1.0 million warrants | $1.85 | |
| Total shares and warrants issued: | 22.7 million | Total proceeds: | $46.4 |

In 2004, we issued approximately 5.1 million common stock shares in two registered direct placements for net proceeds of $39.4 million. In addition, we received approximately $4.4 million for issuing 1.1 million common stock shares related to the exercise of warrants that were issued in a 2003 private placement.

In 2006, 2005 and 2004 we issued approximately 51,000, 121,000 and 1.3 million shares of common stock to our employees under stock options plans and received in net proceeds approximately $72,000, $239,000 and $5.9 million, respectively.

*Significant non-dilutive financing activities in 2006, 2005 and 2004 included:*

In 2006, we entered into an agreement where we assigned certain rights associated with a royalty agreement from July 2006 through December 2011 for a $20.0 million upfront payment in cash.

In 2006, we obtained a $2.9 million loan under our $5.2 million revolving working capital debt facility, secured by our Italian accounts receivables.

In 2006 we entered into an equipment funding agreement for up to approximately $2.3 million through December 31, 2007. In March 2005, we extended our $2.0 million December 2003 equipment funding agreement to provide financing for equipment purchases through March 2006. In 2006, 2005 and 2004 we received approximately $600,000, $828,000 and $486,000, respectively, under these equipment funding agreements. Under these equipment funding agreements, in 2006, 2005 and 2004 we used approximately $754,000, $1.0 million and $846,000, respectively, to pay down the debt associated with these equipment funding obligations.

In 2004, under our development agreement with Hitachi we received $556,000 in funding.

*Operating activities*

The material driver of our on-going negative cash flows from operating activities is the result of our sales revenues not offsetting our business expenditures. The increase in cash used in operating activities in 2006 as compared to 2005 primarily related to additional on-going operational costs after our acquisitions of Spectral and Amplimedical, as well as the additional impact on working capital for the increase in accounts receivable at Amplimedical due to its long collection times. The collection cycle at Amplimedical is considered normal in the Italian healthcare market where the majority of the sales have taken place. The increase in cash used in operating activities in 2005 as compared to 2004 primarily

related to incurring a full year of additional on-going operational activities after our 2004 acquisition of Epoch and SynX.

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*Investing activities*

In 2006, 2005 and 2004 to increase the rate of return on excess cash balances, we invested excess cash received from our financing activities into highly liquid short-term investments. In 2006 and 2005, cash provided by investing activities was primarily the result of using cash from the sale and maturity of these short-term investments to fund on-going operations. Cash provided by investing activities decreased in 2006 as compared to 2005 primarily due to the use of approximately $7 million in cash related to the purchase of Spectral s and Amplimedical s assets. In 2005, we used cash in investing activities to make a series of strategic investments into Jurilab, FasTraq and PGx and to pay outstanding liabilities associated with the December 2004 acquisition of Epoch. In 2004, the cash used in investing activities was a result of us purchasing short-term investments with the excess cash generated from our financing activities and issuing 15.1 million shares of common stock to acquire SynX and Epoch where we received $3.5 million in cash, net of the associated acquisition expenses.

Capital spending is essential to our product innovation initiatives and maintaining our operational capabilities. Therefore, in 2006, 2005 and 2004 we used cash to purchase $2.0 million, $1.3 million and $800,000 in property and equipment to support the development of our product lines. The increases in spending in property equipment purchased in 2006, 2005 and 2004 is a result of us purchasing additional property and equipment to support the on-going selling and development efforts of the businesses we acquired in 2006 and 2004.

We have no significant contractual obligations not fully recorded on our Consolidated Balance Sheets or fully disclosed in the Notes to our Condensed Consolidated Financial Statements. We have no off-balance sheet arrangements as defined in S-K 303(a)(4)(ii).

At December 31, 2006, our outstanding contractual obligations included (in thousands):

| | | Payments Due by Period | | | |
|---|---|---|---|---|---|
| **Contractual Obligations & Other Commitments** | **Total** | **Less Than 1 year** | **1 2 years** | **3 5 years** | **Thereafter** |
| Debt obligations[(a)] | $ 4,125 | $ 3,590 | $ 535 | $ | $ |
| Other long term liabilities[(b)] | 4,851 | | | | 4,851 |
| Operating leases | 15,043 | 3,121 | 3,154 | 3,234 | 5,534 |
| Purchase commitments[(c)] | 860 | 860 | | | |
| Acquisition payable[(d)] | 2,570 | | | | 2,570 |
| Commitments to fund research and development[(e)] | 1,075 | 1,075 | | | |
| Assignment of royalty interests[(f)] | 25,140 | 4,300 | 4,820 | 5,200 | 10,820 |
| Total contractual obligations & other commitments | $ 53,664 | $ 12,946 | $ 8,509 | $ 8,434 | $ 23,775 |

(a) We have recorded in our balance sheets debt related to the consolidation of Jurilab, a material VIE, of which we are the primary beneficiary. The liabilities recognized as a result of consolidating the VIE do not represent additional claims on our general assets; rather, they represent claims against the specific assets of the consolidated VIE. Therefore, we have only included debt obligations that represent claims on our general assets.

(b) In July 2000, we executed a ten-year agreement with Hitachi to develop, manufacture and distribute potential products based on the parties proprietary technologies. At a minimum, we were required to match the Hitachi contribution to our research and development on an annual basis over a ten-year period. In addition, we are required to repay 50% of Hitachi s contributions to research and development with no interest over an indefinite period of time. From the inception of the collaboration agreement with Hitachi through the termination of the agreement in August 2003, we received a total of $9.8 million in sponsored research funding. Half of this funding was recorded as revenue and the remaining half is recorded as a long-term liability. We recognized the last $500,000 in revenue from Hitachi in 2004 and do not expect any

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revenue from this agreement in the future. At December 31, 2006 we owe approximately $4.9 million to Hitachi and the repayment amount is determined as 2% of our gross molecular testing system cartridge sales.

(c) Our manufacturing agreement with Hitachi, Ltd. ( Hitachi ) requires that we provide annual purchase commitments to Hitachi for our next generation NanoChip® workstations, the NanoChip® 400. As of December 31, 2006, we had commitments to purchase approximately $0.9 million of NanoChip® 400 workstations through December 2007. Future purchase commitments will be determined based on product demand and inventory levels.

(d) Represents the remaining estimated payment to be made related to the purchase of Amplimedical. This amount is fully secured by a letter of credit and will therefore be settled through the letter of credit without impacting the cash, cash-equivalent, or short-term investments held at December 31, 2006.

(e) We have entered into various development agreements for the development of a certain future products. Actual funding of the commitments included in the table above are subject to performance by our development partners and their ability to meet certain milestones. The $1.1 million commitment above assumes that all milestones and payments are achieved.

(f) In September 2006, we entered into an agreement to assign certain rights associated with our Applied Biosystems, Inc. royalty agreement from the period of July 2006 through December 2011 to DRT for an upfront payment of $20.0 million. Under the agreement, we have guaranteed minimum royalty payments from Applied Biosystems to DRT. If the royalty payments fall below certain minimums in a given fiscal year, we are required to pay cash to DRT for the difference between the actual royalty payments from Applied Biosystems and the minimums. In addition, if royalty payments from Applied Biosystems are above certain thresholds for a given calendar year we will receive, in cash, a certain percentage of the amount above the threshold.

We are a party to development site agreements with various entities where we may be obligated to pay license fees or royalties for any customer owned or licensed intellectual property used to develop any of our commercial products. None of these agreements individually are considered material.

**Future Accounting Requirements**

In June 2006, the FASB issued FASB Interpretation Number 48, *Accounting for Uncertainty in Income Taxes an interpretation of FASB Statement No. 109* ( FIN 48 ), which clarifies the accounting for uncertainty in tax positions. FIN 48 requires that we recognize the impact of a tax position in our financial statements if that position is more likely than not of being sustained on audit, based on the technical merits of the position. The provisions of FIN 48 are effective as of the beginning of our 2007 fiscal year, with the cumulative effect of the change in accounting principle recorded as an adjustment to opening retained earnings. We do not expect the adoption of this statement to have a material impact on our consolidated results of operations and financial condition.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities Including an amendment of FASB Statement No. 115.* SFAS No. 159 permits entities to choose to measure many financial instruments and certain other items at fair value. Unrealized gains and losses on items for which the fair value option has been elected will be recognized in earnings at each subsequent reporting date. SFAS No. 159 is effective for us beginning January 1, 2008. We are evaluating the impact that the adoption of SFAS No. 159 will have on our consolidated financial statements.

**Net operating loss carryforwards**

As of December 31, 2006, we had federal, state and foreign net operating loss, or NOL, carryforwards of approximately $285.4 million, $109 million and $32.6 million, respectively, and $9.2 million and $6.2 million of research and development, tax credits available to offset future federal and state income taxes, respectively. The federal and state NOL carryforwards are subject to alternative minimum tax limitations and to examination by

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the tax authorities. The federal tax loss carryforwards will continue expiring in 2007, unless utilized, and the state tax loss carryforwards will continue expiring in 2007, unless utilized. The federal and state R&D tax credit carryforwards will continue expiring in 2007 unless utilized. Pursuant to Sections 382 and 383 of the Internal Revenue Code, annual use of the our net operating losses and credit carryforwards may be limited due to cumulative changes in ownership of more than 50% over a 3-year period. We may be subject to similar limitations on our Canadian losses acquired from SynX. We have not performed a formal analysis to quantify the amount of possible limitations. Currently the net operating losses reflected above have not been reduced by potential limitations, however, a full valuation allowance has been placed on all deferred tax assets and, therefore, there is no material impact on our financial statements. Similar limitations may also apply to utilization of R&D tax credits to offset taxes payable. However, we do not believe such limitations may have a material impact on our ability to utilize the NOLs.

**Item 7A.** ***Quantitative and Qualitative Disclosures About Market Risk***

*Interest rate exposure*

Our exposure to market risk due to fluctuations in interest rates relates primarily to short-term investments. These short-term investments, reported at an aggregate fair market value of $13.9 million as of December 31, 2006, consist primarily of investments in debt instruments of financial institutions and corporations with strong credit ratings and United States government obligations. These securities are subject to market rate risk inasmuch as their fair value will fall if market interest rates increase. If market interest rates were to increase immediately and uniformly by 100 basis points from the levels prevailing at December 31, 2006, for example, the fair value of the portfolio would not decline by a material amount. We do not use derivative financial instruments to mitigate the risk inherent in these securities. However, we do attempt to reduce such risks by generally limiting the maturity date of such securities, diversifying our investments and limiting the amount of credit exposure with any one issuer. While we do not always have the intent, we do currently have the ability to hold these investments until maturity and, therefore, believe that reductions in the value of such securities attributable to short-term fluctuations in interest rates would not materially affect our financial position, results of operations or cash flows. Changes in interest rates would affect the interest income we earn on our cash balances after re-investment.

*Foreign Currency Exchange Rate Exposure*

The functional currency for our Canadian and Netherlands subsidiaries is the U.S. dollar. The functional currency of our majority owned subsidiaries in Italy is the euro. The Italian subsidiaries accounts are translated from the euro to the U.S. dollar using the current exchange rate in effect at the balance sheet date for balance sheet accounts, and using the average exchange rate during the period for revenues and expense accounts. The effects of translation are recorded in accumulated other comprehensive income in the consolidated financial statements included herein. In certain instances, our subsidiaries conduct business with customers and vendors in euros or in other local European currencies. Exchange gains and losses arising from these transactions are recorded using the actual exchange rate differences on the date of the transaction. We have not taken any action to reduce our exposure to changes in foreign currency exchange rates, such as options or futures contracts, with respect to transactions with our European customers and vendors. The net tangible assets of our foreign subsidiaries, excluding intercompany balances, was approximately $13.0 million at December 31, 2006.

Notwithstanding the foregoing, the indirect effect of fluctuations in interest rates and foreign currency exchange rates could have a material adverse effect on our business financial condition and results of operations. For example currency exchange rate fluctuations may affect international demand for our products. In addition, interest rates fluctuations may affect our customers buying patterns. Furthermore, interest rate and currency exchange rate fluctuations may broadly influence the United States and foreign economies resulting in a material adverse effect on our business, financial condition and results of operations.

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**Item 8.** ***Financial Statements and Supplementary Data***

Our consolidated financial statements as of December 31, 2006 and 2005 and for the three years in the period ended December 31, 2006 and the Report of Ernst and Young LLP, Independent Registered Public Accounting Firm, are included in this Annual Report on Form 10-K.

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

None.

**Item 9A.** ***Controls and Procedures***

(a) Evaluation of Disclosure Controls and Procedures.

We have carried out an evaluation, under the supervision and the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act ), as of the end of the fiscal quarter covered by this report. Based upon that evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures are effective that (a) the information required to be disclosed by us in the reports that 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 (b) such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including cost limitations, the possibility of human error, judgments and assumptions regarding the likelihood of future events, and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can provide only reasonable assurance of achieving their control objectives.

(b) Change in Internal Control over Financial Reporting.

In the fourth quarter of 2006, we continued to make minor improvements to our internal control structure and financial reporting processes. Due to the acquisition of Spectral and Amplimedical we were required to implement new processes and controls over net product sales, cost of sales and other commercial transactions related to its commercial operations. As required by the implementation of SFAS No. 123R, we changed our internal controls and processes related to the calculation and recording of share based compensation in our statement of operations. We implemented various key controls to mitigate the risks associated with these transitions. However, as of December 31, 2006 we have not tested the operating effectiveness of the new internal controls related to the integration of Spectral or Amplimedical. Other than these changes, there were no significant changes in our internal control over financial reporting identified in connection with the evaluation of such controls that occurred during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect our internal control over financial reporting.

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**Management s Report on Internal Control over Financial Reporting**

**MANAGEMENT STATEMENT**

RESPONSIBILITY FOR PREPARATION OF THE FINANCIAL STATEMENTS AND ESTABLISHING AND MAINTAINING ADEQUATE INTERNAL CONTROL OVER FINANCIAL REPORTING

We are responsible for the preparation of the financial statements included in this Annual Report. The financial statements were prepared in accordance with accounting principles generally accepted in the United States of America and include amounts that are based on the best estimates and judgments of management. The other financial information contained in this Annual Report is consistent with the financial statements.

Our internal control system is designed to provide reasonable assurance concerning the reliability of the financial data used in the preparation of Nanogen s financial statements, as well as to safeguard the Company s assets from unauthorized use or disposition.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement presentation.

REPORT OF MANAGEMENT ON NANOGEN, INC. S INTERNAL CONTROL OVER FINANCIAL REPORTING

We are also responsible for establishing and maintaining adequate internal control over financial reporting. We conducted an evaluation of the effectiveness of the Company s internal control over financial reporting as of December 31, 2006. In making this evaluation, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control Integrated Framework. Our evaluation included reviewing the documentation of our controls, evaluating the design effectiveness of our controls and testing their operating effectiveness. Our evaluation did not include assessing the effectiveness of internal control over financial reporting at our recently acquired businesses, Spectral and Amplimedical. We did not assess the effectiveness of internal control over financial reporting at these entities. However, we did assess controls over the recording of amounts related to recording the purchase price allocation and consolidation process and determined those controls to be effective. Based on this evaluation we believe that, as of December 31, 2006, the Company s internal controls over financial reporting were effective.

Ernst and Young LLP, an independent registered public accounting firm, has issued their report on our evaluation of Nanogen s internal control over financial reporting. Their report appears on page 59 of this Annual Report.

Date: March 16, 2007

/s/ HOWARD BIRNDORF
**Howard Birndorf**

**Chairman and Chief Executive Officer**

Date: March 16, 2007

/s/ ROBERT SALTMARSH
**Robert Saltmarsh**

**Chief Financial Officer**

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**Report of Independent Registered Public Accounting Firm**

To The Board of Directors and Stockholders of Nanogen, Inc.

We have audited management s assessment, included in the accompanying Management s Report on Internal Control Over Financial Reporting, that Nanogen, Inc. maintained effective internal control over financial reporting as of December 31, 2006, based on criteria established in Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Nanogen, Inc. s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management s assessment and an opinion on the effectiveness of the company s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, evaluating management s assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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.

As indicated in the accompanying Management s Report on Internal Control Over Financial Reporting, management s assessment of, and conclusion on, the effectiveness of internal control over financial reporting did not include the internal controls of Spectral or Amplimedical, which were acquired in 2006 and are included in the consolidated financial statements of Nanogen, Inc., and on a combined basis constituted $31.1 million of total assets as of December 31, 2006 and $11.6 million and $1.7 million of revenues and net loss, respectively, for the year then ended. Our audit of internal control over financial reporting of Nanogen, Inc. also did not include an evaluation of the internal control over financial reporting of Spectral or Amplimedical.

In our opinion, management s assessment that Nanogen, Inc., maintained effective internal control over financial reporting as of December 31, 2006, is fairly stated, in all material respects, based on the COSO criteria. Also, in our opinion, Nanogen, Inc., maintained, in all material respects, effective internal control over financial reporting as of December 31, 2006, based on the COSO criteria**.**

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We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Nanogen, Inc. as of December 31, 2006 and 2005, and the related consolidated statements of operations, shareholders equity and cash flows for each of the three years in the period ended December 31, 2006 of Nanogen, Inc. and our report dated March 14, 2007 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

San Diego, California

March 14, 2007

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**Item 9B.** ***Other Information***
None.

**PART III**

**Item 10.** ***Directors, Executive Officers and Corporate Governance***
The information required by this item concerning our directors, executive officers, Section 16 compliance and code of ethics is incorporated by reference to the information set forth in the sections titled Election of Directors, Executive Officers of the Company, Section 16(a) Beneficial Ownership Reporting Compliance and Code of Ethics in our definitive proxy statement to be filed with the Securities and Exchange Commission in connection with the 2007 Annual Meeting of Stockholders (the Proxy Statement ).

**Item 11.** ***Executive Compensation***
The information required by this item is incorporated by reference to the Proxy Statement under the heading Compensation of Executive Officers and Directors.

**Item 12.** ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***
The information required by this item is incorporated by reference to the Proxy Statement under the heading Security Ownership of Certain Beneficial Owners and Management and Equity Compensation Plan Information .

**Item 13.** ***Certain Relationships and Related Transactions and Director Independence***
The information required by this item is incorporated by reference to the Proxy Statement under the heading Certain Transactions and Election of Directors.

**Item 14.** ***Principal Accountant Fees and Services***
The information required by this item is incorporated by reference to the Proxy Statement under the heading Principal Accountant Fees and Services .

**PART IV**

**Item 15.** ***Exhibits and Financial Statement Schedules***
(a)(1) Financial Statements:

Our financial statements are included herein as required under Item 8 of this Annual Report on Form 10-K. See Index on page F-1.

(2) Financial Statement Schedules

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**Schedule II Valuation and Qualifying Accounts**

**For the Years Ended December 31, 2006, 2005 and 2004**

**(in thousands)**

| | Balance at Beginning of Period | Acquired in acquisitions | Additions (charges to expenses) | Deductions | Balance at end of year |
|---|---|---|---|---|---|
| Allowance for doubtful accounts | | | | | |
| Year ended December 31, 2006 | $ 70 | $ 64 | $ 62 | $ (13) | $ 183 |
| Year ended December 31, 2005 | $ 176 | $ | $ | $ (106) | $ 70 |
| Year ended December 31, 2004 | $ 105 | $ 53 | $ 239 | $ (221) | $ 176 |
| Inventory reserve for obsolescence | | | | | |
| Year ended December 31, 2006 | $ 5,148 | $ 379 | $ 480 | $ (1,862) | $ 4,145 |
| Year ended December 31, 2005 | $ 5,860 | $ | $ | $ (712) | $ 5,148 |
| Year ended December 31, 2004 | $ 2,483 | $ | $ 3,746 | $ (369) | $ 5,860 |

3) Exhibits

**EXHIBIT INDEX**

| Exhibit Number | Description of Document |
|---|---|
| 1.1(36) | Placement Agency Agreement, between Registrant and Ascendant Securities, dated February 5, 2007. (1.1) |
| 1.2(36) | Form of Securities Purchase Agreement, dated February 5, 2007. (1.2) |
| 2.1(20) | Plan of Arrangement between Nanogen, Inc. and SynX Pharma, Inc., dated February 9, 2004. |
| 2.2(19) | Agreement and Plan of Merger and Reorganization dated September 7, 2004, by and among Nanogen, Inc., Empire Acquisition Corp. and Epoch Biosciences, Inc. |
| 2.3(28) | Asset Purchase Agreement among Registrant, SynX Pharma, Inc. and Spectral Diagnostics, Inc., dated December 19, 2005. |
| 2.4(34) | Asset Purchase Agreement by and between Nanogen, Inc., Nanogen Advanced Diagnostics, S.r.L. and Amplimedical S.p.A. (2.1) |
| 3.1(3) | Restated Certificate of Incorporation. (3.(I)1) |
| 3.2(17) | Certificate of Amendment to Restated Certificate of Incorporation. |
| 3.3(3) | Certificate of Designations, as filed with the Delaware Secretary of State on November 23, 1998. (3.(I)2) |
| 3.4(11) | Amended and Restated Bylaws of Registrant. (3.(II)1) |
| 4.1(1) | Form of Common Stock Certificate. |
| 4.2(2) | Rights Agreement between Registrant and BankBoston, N.A., dated November 17, 1998. |
| 4.3(8) | Amendment No. 1 to Rights Agreement between Registrant and FleetBoston, N.A., dated December 11, 2000. |
| 4.4(34) | Form of Convertible Promissory Note. (4.1) |
| 4.5(29) | Form of Warrant, dated September 28, 2005. (4.1) |

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| Exhibit Number | Description of Document |
|---|---|
| 4.6(36) | Form of Warrant, dated February 5, 2007. (4.1) |
| 10.1(21)(A) | Amended and Restated 1997 Stock Incentive Plan of Nanogen, Inc. (the 1997 Plan ). (99.1) |
| 10.2(6)(A) | Form of Incentive Stock Option Agreement under the 1997 Plan, as amended. (10.2) |
| 10.3(6)(A) | Form of Nonqualified Stock Option Agreement under the 1997 Plan, as amended. (10.3) |
| 10.4(21)(A) | Amended and Restated Nanogen, Inc. Employee Stock Purchase Plan. (99.2) |
| 10.5(13)(A) | Nanogen, Inc. 2002 Stock Bonus Plan. |
| 10.6(1)(A) | Form of Indemnification Agreement between Registrant and its directors and executive officers. (10.7) |
| 10.7(7) | Warrant to Purchase Common Stock between Registrant, Aventis Research and Technologies Verwaltungs GmbH, dated September 22, 2000. (10.9) |
| 10.8(12) | Warrant to Purchase Common Stock between Registrant and Gene Type AG, dated April 12, 2002. (10.9) |
| 10.9(16) | Form of Securities Purchase Agreement between Registrant and investors described therein, dated September 17, 2003. |
| 10.10(18) | Warrant to Purchase Common Stock between Registrant and Aventis Pharma Deutchland GmbH, dated June 6, 2003. (10.10) |
| 10.11(5)(+) | Reader, Loader and Cassette Low Cost Engineering and Manufacturing Agreement between Registrant and Hitachi, Ltd., dated as of December 15, 1999. |
| 10.12(7)(+) | First Amendment to Reader, Loader and Cassette Low Cost Engineering and Manufacturing Agreement between Registrant and Hitachi, Ltd., dated July 26, 2000. (10.7) |
| 10.13(7)(+) | Collaboration Agreement among Registrant and Hitachi, Ltd., Nissei Sangyo Co. Ltd. and Hitachi Instruments Service Co. Ltd. (collectively, Hitachi ), dated July 26, 2000. (10.6) |
| 10.14(7) | Common Stock Purchase Agreement between Registrant and Hitachi, dated July 26, 2000. (10.8) |
| 10.15(1) | Amended and Restated Investors Rights Agreement between Registrant and certain security holders set forth therein, dated May 5, 1997. (10.18) |
| 10.16(1) | Master Lease Agreement between Registrant and Mellon US Leasing, dated September 11, 1997. (10.19) |
| 10.17(1) | Master Lease Agreement between Registrant and LMP Properties Ltd., dated June 29, 1994, as amended on March 14, 2001. (10.20) |
| 10.18(1) | Lease Agreement between Registrant and Lease Management Services, Inc., dated April 26, 1994, as amended on December 13, 1994 and June 13, 1996. (10.21) |
| 10.19(1)(A) | Form of Promissory Note between Registrant and certain of its executive officers, dated August 22, 1996. (10.23) |
| 10.20(1)(A) | Form of Promissory Note between Registrant and certain of its executive officers, dated June 30, 1995. (10.24) |
| 10.21(1)(A) | Forms of Performance Stock Option Agreement. (10.26) |
| 10.22(15)(A) | Separation Agreement between Registrant and Kieran T. Gallahue, dated January 2, 2003.(10.21) |

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| Exhibit Number | Description of Document |
|---|---|
| 10.23(15)(A) | Separation Agreement between Registrant and Dr. Vance R. White, dated December 11, 2002. (10.22) |
| 10.24(18)(A) | Separation Agreement between Registrant and Ira Marks, dated August 15, 2003. |
| 10.25(15)(A) | Employment Agreement between Registrant and Bruce A. Huebner, dated December 1, 2002.(10.24) |
| 10.26(15)(A) | Employment Agreement between Registrant and William Franzblau, dated January 24, 2003. (10.25) |
| 10.27(15)(A) | Employment Agreement between Registrant and David Macdonald, dated January 24, 2003. (10.26) |
| 10.28(18)(A) | Separation Agreement between Registrant and Gerard A. Wills, dated May 21, 2003. |
| 10.31(15)(A) | Indemnification Agreement between Registrant and Bruce A. Huebner, dated effective as of December 1, 2002. (10.30) |
| 10.32(15)(A) | Indemnification Agreement between Registrant and Graham Lidgard, dated effective as of January 24, 2003. (10.31) |
| 10.33(9)(+) | Cooperation and Shareholders Agreement among Aventis Research & Technologies GmbH & Co. KG ( Aventis ), Registrant and Nanogen Recognomics GmbH ( Nanogen Recognomics ), dated June 29, 2001. (10.3) |
| 10.34(9)(+) | Contribution Agreement among Aventis, Registrant and Nanogen Recognomics, dated June 27, 2001. (10.4) |
| 10.35(11)(+) | Settlement Agreement among Motorola, Inc., Genometrix, Inc., Massachusetts Institute of Technology and Registrant, dated July 20, 2001. (10.6) |
| 10.36(14) | Settlement Agreement among CombiMatrix Corporation, Dr. Donald Montgomery, Acacia Research Corporation and Registrant, dated September 30, 2002. |
| 10.37(4) | Master Loan and Security Agreement between Registrant and Transamerica Business Credit Corporation, dated June 14, 1999. |
| 10.38 (22)(+) | Cross License Agreement on NT-proBNP between SynX Pharma, Inc. and Roche Diagnostics GmbH., dated July 17, 2003. |
| 10.39(23) | SynX Pharma, Inc. Stock Option Plan. (99.1) |
| 10.40(23) | Form of Stock Option Agreement (SynX Pharma, Inc. Stock Option Plan). (99.2) |
| 10.41(23) | Form of Stock Option Assumption Agreement (99.3) |
| 10.42(24) | Epoch Biosciences, Inc. 2003 Stock Incentive Plan. (99.1) |
| 10.43(24) | Epoch Pharmaceuticals, Inc. Incentive Stock Option, Nonqualified Stock Option and Restricted Stock Purchase Plan 1991. (99.2) |
| 10.44(24) | Epoch Pharmaceuticals, Inc. Incentive Stock Option, Nonqualified Stock Option and Restricted Stock Purchase Plan 1993. (99.3) |
| 10.45(25) | Epoch Biosciences, Inc. 2003 Stock Incentive Plan, Non-qualified Stock Option Agreement. (10.46) |

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| Exhibit Number | Description of Document |
|---|---|
| 10.46(25)(+) | Second Amended and Restated Collaboration, License and Supply Agreement by and between Epoch Pharmaceuticals, Inc. and PE Corporation, through its Applied Biosystems Group, dated August 17, 2000. (10.49) |
| 10.47(25)(+) | First Side Agreement dated October 31, 2001 by and between Epoch and PE Corporation, through its Applied Biosystems Group. (10.50) |
| 10.48(25)(+) | Amendment No. 1 to Second Amended and Restated Collaboration, License and Supply Agreement between Epoch and Applera Corporation, formerly PE Corporation, through its Applied Biosystems Group, dated July 26, 2002. (10.51) |
| 10.49(26) | Epoch Biosciences, Inc. 2003 Stock Incentive Plan, as Assumed by Nanogen, Inc., amended and restated as of July 29, 2005. |
| 10.50(28) | Placement Agency Agreement among Registrant, Seven Hills Partners LLC and Stonegate Securities, Inc., dated September 27, 2005. (10.1) |
| 10.51(29)(+) | Amendment No. 2 to Second Amended and Restated Collaboration, License and Supply Agreement between Epoch and Applera Corporation, formerly PE Corporation, through its Applied Biosystems Group, dated effective as of December 31, 2005. (10.56) |
| 10.52(29)(+) | Manufacturing and Distribution Agreement between Registrant and Princeton BioMeditech Corporation, dated October 27, 2005. (10.58) |
| 10.53(29)(+) | Development Agreement between Registrant and Princeton BioMeditech Corporation, dated January 13, 2006. (10.57) |
| 10.54(29)(+)(A) | 2006 Executive Officer Incentive Compensation Plan. (10.59) |
| 10.55(30) | Stock Purchase Agreement, dated as of March 15, 2006 between Fisher Scientific International Inc., and Nanogen, Inc. (10.1) |
| 10.56(34) | Amended and Restated Stock Purchase Plan. (Appendix A) |
| 10.57(34)(A) | Nanogen, Inc. Employee Stock Purchase Plan. (Appendix B) |
| 10.58(31) | Common Stock Purchase Agreement between Nanogen, Inc. and Azimuth Opportunity Ltd., dated May 10, 2006. |
| 10.59(33)(++) | Royalty Interest Assignment Agreement between Epoch BioSciences, Inc., Drug Royalty Trust 9, and Nanogen Inc., dated September 29, 2006. (10.1) |
| 10.60(32) | Security Agreement between Drug Royalty Trust 9 and Epoch BioSciences, Inc., dated September 29, 2006. (10.2) |
| 10.61(32)(A) | Independent Contractor Agreement between Nanogen, Inc. and Heiner Dreismann, dated November 6, 2006. (10.3) |
| 10.62(36)(A) | Amended and Restated Employment Agreement between Registrant and Howard C. Birndorf, dated February 19, 2007. (10.1) |
| 10.63(36)(A) | Amended and Restated Employment Agreement between Registrant and Robert Saltmarsh, dated February 19, 2007. (10.2) |
| 10.64(36)(A) | Amended and Restated Employment Agreement between Registrant and Graham Lidgard, dated February 19, 2007. (10.3) |
| 10.65(36)(A) | Employment Agreement between Registrant and Dr. William L. Respess, dated February 19, 2007. (10.4) |

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| Exhibit Number | Description of Document |
|---|---|
| 10.66(36)(A) | Employment Agreement between Registrant and David Ludvigson, dated February 19, 2007. (10.5) |
| 14.1(15) | Nanogen, Inc. Code of Business Conduct and Ethics. (99.2) |
| 21.1 | List of Subsidiaries. (21.1) |
| 23.1 | Consent of Independent Registered Public Accounting Firm. |
| 31.1 | Certifications of Chief Executive Officer Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended. |
| 31.2 | Certifications of Chief Financial Officer Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended. |
| 32.1 | Certifications of Chief Executive Officer Required by Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended. |
| 32.2 | Certifications of Chief Financial Officer Required by Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended. |

(1) Incorporated by reference to Registrant s Registration Statement on Form S-1 (File No. 333-42791). Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(2) Incorporated by reference to Exhibit 4.2 to the Registrant s Registration Statement on Form 8-A12G, filed on November 24, 1998.

(3) Incorporated by reference to Registrant s Annual Report on Form 10-K filed on March 29, 1999. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(4) Incorporated by reference to Exhibit 10.38 to the Registrant s Annual Report on Form 10-K for the year ended December 31, 1999.

(5) Incorporated by reference to Exhibit 10.1 to the Registrant s Quarterly Report on Form 10-Q filed on May 12, 2000.

(6) Incorporated by reference to the Registrant s Form S-8 filed on June 15, 2000. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed

(7) Incorporated by reference to the Registrant s Quarterly Report on Form 10-Q filed on November 14, 2000. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(8) Incorporated by reference to Exhibit 4.1 to the Registrant s Form 8-K filed on December 12, 2000.

(9) Incorporated by reference to the Registrant s Quarterly Report on Form 10-Q filed on August 14, 2001. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(10) Incorporated by reference to Exhibit 10.1 to the Registrant s Form S-8 filed on June 20, 2001. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(11) Incorporated by reference to the Registrant s Quarterly Report on Form 10-Q filed on November 14, 2001. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

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(12) Incorporated by reference to the Registrant s Quarterly Report on Form 10-Q filed on August 14, 2002. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(13) Incorporated by reference to Exhibit 10.1 to the Registrant s Form S-8 filed on August 16, 2002.

(14) Incorporated by reference to Exhibit 10.1 to the Registrant s Quarterly Report on Form 10-Q for the quarter ended September 31, 2002.

(15) Incorporated by reference to Registrant s Annual Report on Form 10-K filed on March 31, 2003. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(16) Incorporated by reference to Exhibit 10.1 to the Registrant s Form 8-K filed on September 22, 2003.

(17) Incorporated by reference to Exhibit 3.1 to the Registrant s Form 8-K filed on December 21, 2004.

(18) Incorporated by reference to the Registrant s Form 10-K filed on March 30, 2004. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(19) Incorporated by reference to Exhibit 2.1 of the Registrant s Form 8-K filed on September 8, 2004.

(20) Incorporated by reference to Exhibit 2.1 of the Registrant s Form 8-K filed on May 6, 2004.

(21) Incorporated by reference to the Registrant s Form S-8 (File No. 333-116605) filed on June 18, 2004. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(22) Incorporated by reference to Exhibit 10.2 of the Registrant s Quarterly Report on Form 10-Q filed on August 16, 2004.

(23) Incorporated by reference to the Registrant s Registration Statement on Form S-8 (File No. 333-115629), filed on May 19, 2004. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(24) Incorporated by reference to the Registrant s Registration Statement on Form S-8 (File No. 333-121508) filed on December 21, 2004. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(25) Incorporated by reference to the Registrant s Annual Report on Form 10-K filed on March 15, 2005. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(26) Incorporated by reference to Exhibit 99.1 to the Registrant s Form S-8 (File No. 333-127916) filed on August 29, 2005.

(27) Incorporated by reference to Exhibit 2.1 to the Registrant s Form 8-K filed on December 23, 2005.

(28) Incorporated by reference to the Registrant s Form 8-K filed on September 28, 2005. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(29) Incorporated by reference to the Registrant s Annual Report on Form 10-K filed on March 16, 2006. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(30) Incorporated by reference to the Registrant s Form 8-K filed on March 16, 2006.

(31) Incorporated by reference to Exhibit 10.1 to the Registrant s Form 8-K filed on May 10, 2006.

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(32) Incorporated by reference to the Registrant s Quarterly Report on Form 10-Q filed on November 9, 2006. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(33) Incorporated by reference to the Registrant s Form 8-K filed on May 5, 2006. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(34) Incorporated by reference to the Registrant s definitive proxy statement filed on May 5, 2006. Parenthetical references following the description of each document relate to the Appendix under which such exhibit was initially filed.

(35) Incorporated by reference to the Registrant s Form 8-K filed on February 5, 2007. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(36) Incorporated by reference to Registrant s Form 8-K filed on February 23, 2007. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

(A) Indicates management compensatory plan or arrangement.

(+) Confidential treatment has been granted for certain information contained in this document pursuant to an order of the Securities and Exchange Commission. Such information has been omitted and filed separately with the Securities and Exchange Commission.

(++) Confidential treatment has been requested for certain information contained in this document. Such information has been omitted and filed separately with the Securities and Exchange Commission.

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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.

NANOGEN, INC.

Date: March 16, 2007 By: /s/ HOWARD C. BIRNDORF
**Howard C. Birndorf**
**Chairman of the Board,**
**and Chief Executive Officer**

Pursuant to the requirements to 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 and on the dates indicated.

| Signature | Title | Date |
|---|---|---|
| /s/ HOWARD C. BIRNDORF<br>**Howard C. Birndorf** | Chairman of the Board,<br>and Chief Executive Officer<br>(Principal Executive Officer) | March 16, 2007 |
| /s/ ROBERT SALTMARSH<br>**Robert Saltmarsh** | Chief Financial Officer<br>(Principal Financial and Accounting Officer) | March 16, 2007 |
| /s/ DAVID SCHREIBER<br>**David Schreiber** | Director | March 16, 2007 |
| /s/ STELIOS B. PAPADOPOULOS<br>**Stelios B. Papadopoulos** | Director | March 16, 2007 |
| /s/ ROBERT E. WHALEN<br>**Robert E. Whalen** | Director | March 16, 2007 |
| /s/ WILLIAM G. GERBER<br>**William G. Gerber** | Director | March 16, 2007 |
| /s/ HEINER DREISMANN<br>**Heiner Dreismann** | Director | March 16, 2007 |

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**NANOGEN, INC.**

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Board of Directors and Stockholders of Nanogen, Inc.

We have audited the accompanying consolidated balance sheets of Nanogen, Inc., as of December 31, 2006 and 2005, and the related consolidated statements of operations, stockholders equity, and cash flows for each of the three years in the period ended December 31, 2006. Our audits also included the financial statement schedule listed in the Index at Item 15(a)(2). These financial statements and schedule are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements and schedule 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Nanogen, Inc., at December 31, 2006 and 2005, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2006, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects, the information set forth therein.

As discussed in Note 2 to the consolidated financial statements, Nanogen, Inc. changed its method of accounting for share-based payments in accordance with Statement of Financial Accounting Standards (SFAS) No. 123 (revised 2004) on January 1, 2006.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Nanogen, Inc. s internal control over financial reporting as of December 31, 2006, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 14, 2007 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, California

March 14, 2007

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**NANOGEN, INC.**

**CONSOLIDATED BALANCE SHEETS**

**(in thousands, except par value and share data)**

| | As of December 31, 2006 | 2005 |
|---|---|---|
| **ASSETS** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 11,261 | $ 6,194 |
| Short-term investments | 13,923 | 26,185 |
| Receivables, net | 11,568 | 2,141 |
| Inventories, net | 7,691 | 3,724 |
| Other current assets | 2,058 | 1,457 |
| Total current assets | 46,501 | 39,701 |
| Property and equipment, net | 9,388 | 7,590 |
| Acquired technology rights and intangibles, net | 17,894 | 9,898 |
| Restricted cash | 5,131 | 1,794 |
| Other assets, net | 1,312 | 1,920 |
| Goodwill | 39,027 | 37,178 |
| Total assets | $ 119,253 | $ 98,081 |
| **LIABILITIES AND STOCKHOLDERS EQUITY** | | |
| Current liabilities: | | |
| Accounts payable and accrued liabilities | $ 13,395 | $ 7,728 |
| Acquisition payable, secured by letter of credit | 2,061 | |
| Deferred revenue | 3,376 | 535 |
| Assigned royalty interests obligation | 3,447 | |
| Common stock warrants | 11 | 86 |
| Current portion of debt obligations | 3,590 | 701 |
| Total current liabilities | 25,880 | 9,050 |
| Debt obligations, less current portion | 535 | 643 |
| Debt obligations of variable interest entity (Note 11) | 9,941 | 7,245 |
| Sponsored research payable | 4,851 | 4,854 |
| Long-term assigned royalty interests obligation | 15,529 | |
| Other long-term liabilities | 2,304 | 1,794 |
| Total long term liabilities | 33,160 | 14,536 |
| Commitments and contingencies | | |
| Stockholders equity: | | |
| Convertible preferred stock, $0.001 par value, 5,000,000 shares authorized at December 31, 2005 and 2004; no shares issued and outstanding at December 31, 2006 and 2005 | | |
| Common stock, $0.001 par value, 135,000,000 shares authorized at December 31, 2006 and 2005; 67,468,252 and 54,794,648 shares issued and outstanding at December 31, 2006 and 2005, respectively | 68 | 55 |
| Additional paid-in capital | 429,971 | 396,297 |
| Accumulated other comprehensive loss | (956) | (189) |
| Deferred compensation | | (2,218) |
| Capital deficit in consolidated variable interest entity, net | (7,373) | (6,856) |
| Accumulated deficit | (360,726) | (311,656) |
| Treasury stock, at cost, 416,027 and 505,830 shares at December 31, 2006 and 2005, respectively | (771) | (938) |

| | | |
|---|---|---|
| Total stockholders equity | 60,213 | 74,495 |
| Total liabilities and stockholders equity | $ 119,253 | $ 98,081 |

See accompanying notes.

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**NANOGEN, INC.**

**CONSOLIDATED STATEMENTS OF OPERATIONS**

**(in thousands, except per share data)**

| | For the Years Ended December 31, | | |
|---|---|---|---|
| | **2006** | **2005** | **2004** |
| Revenues: | | | |
| Product sales | $ 15,996 | $ 4,544 | $ 2,690 |
| License fees and royalty income | 7,908 | 6,530 | 490 |
| Contracts and grants | 2,948 | 1,470 | 1,694 |
| Sponsored research | | | 500 |
| Total revenues | 26,852 | 12,544 | 5,374 |
| Costs and expenses: | | | |
| Cost of product sales | 13,290 | 4,518 | 5,642 |
| Research and development | 25,683 | 22,033 | 18,117 |
| Selling, general and administrative | 33,385 | 23,578 | 18,232 |
| Amortization of purchased intangible assets | 2,987 | 1,571 | |
| Impairment charge on goodwill | | 59,000 | |
| Charge for acquired in-process research and development | | | 3,758 |
| Impairment of acquired technology rights | | 167 | |
| Total costs and expenses | 75,345 | 110,867 | 45,749 |
| Loss from operations | (48,493) | (98,323) | (40,375) |
| Other income (expense): | | | |
| Interest income | 1,046 | 1,408 | 926 |
| Interest expense | (1,292) | (544) | (409) |
| Other expense | (468) | (78) | (221) |
| Warrant valuation adjustment | 75 | 1,026 | (74) |
| Provision for income tax | (249) | | |
| Loss on sale of investments | | | (47) |
| Gain on foreign currency transactions | 311 | 17 | 1,293 |
| Total other income (expense) | (577) | 1,829 | 1,468 |
| Net loss | $ (49,070) | $ (96,494) | $ (38,907) |
| Net loss per share basic and diluted | $ (0.78) | $ (1.95) | $ (1.21) |
| Number of shares used in computing net loss per share basic and diluted | 63,221 | 49,585 | 32,203 |

See accompanying notes.

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**NANOGEN, INC.**

**CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY**

**(in thousands)**

| | Common Stock | | | Treasury Stock | | Accumulated Other Comprehensive | | Capital Deficit in Consolidated Variable | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Additional Paid-in Capital | Shares | Amount | Income (Loss) | Deferred Compensation | Interest Entity | Accumulated Deficit | Total Stockholders Equity |
| Balance at December 31, 2003 | 24,867 | $ 25 | $ 209,014 | (500) | $ (922) | $ 1,136 | $ (175) | $ | $ (176,255) | $ 32,823 |
| Components of comprehensive loss: | | | | | | | | | | |
| Net loss | | | | | | | | | (38,907) | (38,907) |
| Unrealized loss on short-term investments | | | | | | (154) | | | | (154) |
| Cumulative foreign currency translation adjustment | | | | | | (1,156) | | | | (1,156) |
| Total comprehensive loss | | | | | | | | | | (40,217) |
| Issuance of common stock for acquisitions | 15,064 | 15 | 115,278 | | | | (964) | | | 114,329 |
| Issuance of common stock in a direct placement, net of expenses | 5,150 | 5 | 39,405 | | | | | | | 39,410 |
| Issuance of common stock in a private placement, net of expenses | 1,103 | 1 | 4,394 | | | | | | | 4,395 |
| Issuance of common stock for a net warrant exercise | 32 | | | | | | | | | |
| Issuance of common stock to Board of Directors | 17 | | 100 | | | | | | | 100 |
| Issuance of common stock in connection with defined contribution plan | 110 | | 244 | | | | 6 | | | 250 |
| Issuance of common stock, subject to repurchase | 121 | | | | | | | | | |
| Proceeds from the exercise of options | 1,302 | 2 | 5,867 | | | | | | | 5,869 |
| Stock-based compensation | | | 470 | | | | | | | 470 |
| Options issued to consultants | | | 138 | | | | (51) | | | 87 |
| Balance at December 31, 2004 | 47,766 | $ 48 | $ 374,910 | (500) | $ (922) | $ (174) | $ (1,184) | $ | $ (215,162) | $ 157,516 |

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**NANOGEN, INC.**

**CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY (Continued)**

**(in thousands)**

| | Common Stock | | | Treasury Stock | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Additional Paid-in Capital | Shares | Amount | Accumulated Other Comprehensive Income (Loss) | Deferred Compensation | Capital Deficit in Consolidated Variable Interest Entity | Accumulated Deficit | Total Stockholders Equity |
| Balance at December 31, 2004 | 47,766 | $ 48 | $ 374,910 | (500) | $ (922) | $ (174) | $ (1,184) | $ | $ (215,162) | $ 157,516 |
| Components of comprehensive loss: | | | | | | | | | | |
| Net loss | | | | | | | | | (96,494) | (96,494) |
| Unrealized gain on short-term investments | | | | | | 136 | | | | 136 |
| Unrealized loss on other investments | | | | | | (93) | | | | (93) |
| Cumulative foreign currency translation adjustment | | | | | | (58) | | | | (58) |
| Total comprehensive loss | | | | | | | | | | (96,509) |
| Issuance of common stock in a private placement, net of expenses | 6,803 | 7 | 18,793 | | | | | | | 18,800 |
| Issuance of common stock for employee stock purchase plan | 124 | | 324 | | | | | | | 324 |
| Issuance of common stock to employees | 19 | | 36 | (6) | (16) | | | | | 20 |
| Acquired capital deficit in variable interest entity | | | | | | | | (6,856) | | (6,856) |
| Amortization of stock options related to acquisitions | | | | | | | 376 | | | 376 |
| Issuance of common stock to Board of Directors | 34 | | 125 | | | | | | | 125 |
| Issuance of common stock in connection with defined contribution plan, net of forfeitures | 49 | | 122 | | | | (36) | | | 86 |
| Proceeds from the exercise of options | 121 | | 239 | | | | | | | 239 |
| Rescinded warrants | (121) | | | | | | | | | |
| Issuance of restricted stock grants to employees | | | 1,761 | | | | (1,395) | | | 366 |
| Options issued to consultants | | | (13) | | | | 21 | | | 8 |
| Balance at December 31, 2005 | 54,795 | $ 55 | $ 396,297 | (506) | $ (938) | $ (189) | $ (2,218) | $ (6,856) | $ (311,656) | $ 74,495 |

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**NANOGEN, INC.**

**CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY (Continued)**

**(in thousands)**

| | Common Stock | | | Treasury Stock | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Additional Paid-in Capital | Shares | Amount | Accumulated Other Comprehensive Income (Loss) | Deferred Compensation | Capital Deficit in Consolidated Variable Interest Entity | Accumulated Deficit | Total Stockholders Equity |
| Balance at December 31, 2005 | 54,795 | $ 55 | $ 396,297 | (506) | $ (938) | $ (189) | $ (2,218) | $ (6,856) | $ (311,656) | $ 74,495 |
| Components of comprehensive loss: | | | | | | | | | | |
| Net loss | | | | | | | | | (49,070) | (49,070) |
| Unrealized gain on short-term investments | | | | | | 73 | | | | 73 |
| Cumulative foreign currency translation adjustment | | | | | | (840) | | | | (840) |
| Total comprehensive loss | | | | | | | | | | (49,837) |
| Issuance of common stock in private placements, net of expenses | 9,018 | 9 | 20,491 | | | | | | | 20,500 |
| Issuance of common stock related to the conversion of acquisition related debt | 2,887 | 3 | 6,937 | | | | | | | 6,940 |
| Acquired capital deficit in Variable Interest Entity | | | | | | | | (517) | | (517) |
| Issuance of restricted stock | 90 | | | | | | | | | |
| Issuance of common stock for acquisition | 975 | 1 | 2,905 | | | | | | | 2,906 |
| Amortization of stock based compensation | | | 5,486 | | | | | | | 5,486 |
| Elimination of deferred compensation upon adoption of FAS 123R | | | (2,218) | | | | 2,218 | | | |
| Issuance of common stock to Board of Directors | 65 | | | | | | | | | |
| Issuance of common stock in connection with defined contribution plan, net of forfeitures | 3 | | 1 | 90 | 167 | | | | | 168 |
| Proceeds from the exercise of options | 51 | | 72 | | | | | | | 72 |
| Balance at December 31, 2006 | 67,884 | $ 68 | $ 429,971 | (416) | $ (771) | $ (956) | $ | $ (7,373) | $ (360,726) | $ 60,213 |

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**NANOGEN, INC.**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**

**(in thousands)**

| | For the Years Ended December 31, | | |
|---|---|---|---|
| | **2006** | **2005** | **2004** |
| **Operating activities:** | | | |
| Net loss | $ (49,070) | $ (96,494) | $ (38,907) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | | |
| Depreciation and amortization | 6,573 | 4,873 | 4,377 |
| Goodwill impairment charges | | 59,000 | |
| Charge for acquired in-process research and development | | | 3,758 |
| Other asset impairment and non-cash charges (gains) | (230) | 52 | 3,746 |
| Loss on disposal of fixed assets | 597 | 31 | 43 |
| Accretion related to short-term investments | 100 | 276 | 301 |
| Foreign currency transactions gain | (310) | | (1,293) |
| Stock-based compensation expense | 5,486 | 997 | 645 |
| Realized loss on sale of short-term investments | | | 47 |
| Warrant valuation adjustment | (75) | (1,026) | 74 |
| Increase (decreases) in cash caused by changes in operating assets and liabilities, excluding the effects of acquisitions: | | | |
| Receivables, net | (9,197) | (118) | 1,264 |
| Inventories, net | (1,153) | (2,294) | (748) |
| Other current and long-term assets | 164 | 595 | 269 |
| Accounts payable and accrued liabilities | 5,831 | (620) | (3,022) |
| Acquisition payable | | | |
| Deferred revenue and other long-term liabilities | 2,841 | 115 | (49) |
| Net cash used in operating activities | (38,443) | (34,613) | (29,495) |
| **Investing activities:** | | | |
| Purchase of short-term investments | (38,137) | (50,088) | (64,683) |
| Conversion of cash to restricted cash | (3,337) | | |
| Proceeds from sale and maturities of short-term investments | 50,371 | 60,376 | 48,105 |
| Strategic investments, including investment in variable interest entity | | (3,475) | |
| Acquisition of businesses, net of cash acquired | (6,970) | | 3,509 |
| Purchase of equipment | (2,037) | (1,321) | (800) |
| Purchase of patent and technology rights | (50) | (88) | |
| Net cash provided by (used in) investing activities | (160) | 5,404 | (13,869) |
| **Financing activities:** | | | |
| Payments for long term obligations | (754) | (1,082) | (846) |
| Proceeds from assignment of royalty interests obligation | 20,000 | | |
| Payments on assigned royalty interests obligation | (1,024) | | |
| Proceeds from debt financing secured by receivables | 2,931 | | |
| Proceeds from development partner | | | 556 |
| Proceeds from debt obligations of variable interest entity | 2,178 | 996 | |
| Issuance of common stock, net | 20,578 | 19,363 | 49,853 |
| Proceeds from long-term obligations | 601 | 828 | 486 |
| Acquisition of treasury stock | | (16) | |
| Net cash provided by financing activities | 44,510 | 20,089 | 50,049 |
| Effect of exchange rate changes | (840) | (58) | 137 |

| | | | |
|---|---|---|---|
| Net increase (decrease) in cash and cash equivalents | 5,067 | (9,178) | 6,822 |
| Cash and cash equivalents at beginning of year | 6,194 | 15,372 | 8,550 |
| Cash and cash equivalents at end of year | $ 11,261 | $ 6,194 | $ 15,372 |
| **Supplemental disclosure of cash flow information:** | | | |
| Interest paid | $ 495 | $ 211 | $ 97 |
| Net assets of Spectral acquired for common stock | $ 2,906 | $ | $ |
| Net assets of Amplimedical acquired for promissory note | $ 6,939 | $ | $ |
| Net assets of Amplimedical acquired for letter of credit | $ 2,061 | $ | $ |

See accompanying notes.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**December 31, 2006**

**1. Organization**

***Organization and Business Activity***

Nanogen, Inc. was incorporated in California in November 1991 and, in November 1997, was reincorporated in Delaware, as well as all of our consolidated subsidiaries. We are in the business of developing, manufacturing, and selling advanced diagnostic products.

***Basis of Consolidation***

These consolidated financial statements and the accompanying notes relate to Nanogen, Inc. and its consolidated subsidiaries and entities.

***Consolidated Entities:***

*SynX Pharma* ( SynX ) all of the outstanding stock was acquired on April 21, 2004.

*Epoch Biosciences, Inc.* ( Epoch ) all of the outstanding stock was acquired on December 16, 2004.

*Spectral Diagnostic* ( Spectral ) acquired assets related to the rapid cardiac immunoassay test business of an unaffiliated company on February 6, 2005.

*Nanogen Advanced Diagnostics, S.r.L.* ( Amplimedical ) was formed in 2006 and acquired the assets related to rapid cardiac immunoassay test business of an unaffiliated company on May 1, 2006.

*Nanogen Europe B.V.* ( BV ) was formed as a limited liability company in August 2000 in the Netherlands.

*Recognomics GmbH* was formed as a majority-owned joint venture in July 2001 with Aventis, Inc.

***Variable Interest Entities***

In a series of investments from July 2005 to June 2006, we purchased $3.0 million in equity of Jurilab LTD ( Jurilab ). Using the methodology prescribed in Financial Accounting Standards Board Interpretation ( FIN ) No. 46R, *Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51,* we determined we were the primary beneficiary and are required to include Jurilab s assets and liabilities in our consolidated financial statements.

We included Jurilab s assets and liabilities as of the date of our initial investment on July 20, 2005 and its operating results after this date. However, because our maximum loss is limited to our $3.0 million investment, the liabilities we have consolidated in our financial statements do not represent additional claims on our general assets; rather, they represent claims only on the specific assets of Jurilab. Conversely, assets recognized as a result of consolidating Jurilab do not represent additional assets that may be used to satisfy claims against our general assets.

***Basis of Presentation***

The accompanying Consolidated Financial Statements include our accounts and all of our subsidiaries. Intercompany transactions and balances are eliminated in consolidation.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. This basis of accounting contemplates the recovery of the Company s assets and the satisfaction of liabilities in the normal course of business. The Company actively seeks additional financing to fund its development efforts and to commercialize its technologies. There is no assurance such financing will be available to the Company when needed or that such financing would be available under favorable terms.

**2. Summary of Significant Accounting Policies**

***Financial Statement Preparation***

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the reported amounts and the disclosure of contingent amounts in our financial statements and the accompanying notes. Actual results could differ from those estimates. Certain prior year amounts have been reclassified to conform to the current year presentation.

***Cash and Cash Equivalents and Short-term Investments***

We consider all highly liquid investments with maturities of three months or less from the date of purchase to be cash equivalents. We invest excess cash in highly liquid debt instruments of financial institutions and corporations with strong credit ratings and in United States government obligations. We have established guidelines relative to diversification and maturities that maintain safety and liquidity. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates.

We have evaluated our investments in accordance with the provisions of Statement of Financial Accounting Standards ( SFAS ) No. 115, *Accounting for Certain Investments in Debt and Equity Securities*, and we have determined that all of our investment securities are properly classified as available-for-sale. Based on our intent, investment policies and our ability to liquidate debt securities, we classified such short-term investment securities within current assets. Available-for-sale securities are carried at fair value, with unrealized gains and losses included in accumulated other comprehensive loss within stockholders equity. The amortized cost basis of debt securities is periodically adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization is included as a component of interest income. The amortized cost basis of securities sold is based on the specific identification method and all such realized gains and losses are recorded as a component within other income (expense), net.

We review the carrying values of our investments and write down investments to their estimated fair value by a charge to other income (expense) when we determine the decline in value of an investment is considered to be other than temporary.

***Fair Value of Financial Instruments***

The carrying amounts of our cash and cash equivalents, receivables and accounts payable and accrued liabilities approximate their fair value due to the short-term nature of these balances. Our marketable securities available-for-sale are carried at fair value based on quoted market prices. The carrying amounts of short-term and

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

long-term debt obligations approximate fair value as the rates of interest for these instruments approximate market rates of interest currently available to us for similar instruments.

***Allowances for Doubtful Accounts***

We maintain an allowance for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We estimate losses based on, but not limited to, such factors as identification of specific collection issues, past due trends, general economic conditions and payment history. Estimated losses are recorded within an allowance for doubtful accounts and reported as a deduction from gross receivables.

***Restricted Cash***

We have restricted cash representing cash, cash equivalents and short term investments pledged in lieu of cash deposits primarily for facility lease deposits and, in 2006, for acquisition related payables. The restricted cash balance is approximately $5.1 million and $1.8 million at December 31, 2006 and 2005, respectively.

***Inventories***

Inventories are carried at the lower of cost or market, using the first-in, first-out method.

***Property and Equipment***

Property and equipment is stated at cost and depreciated using the straight-line method over the estimated useful lives of the assets. Amortization of leasehold improvements is computed using the straight-line method over the shorter of the lease term or the estimated useful lives of the assets. Maintenance and repair expenses are charged to operations as incurred. When assets are sold, or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any gain or loss is included in the statement of operations.

***Acquired Technology Rights and Intangible Assets***

Acquired technology rights are recorded at cost. Identifiable intangible assets acquired in business acquisitions are recorded at their fair value. Once the commercialization of the acquired technology begins, the asset is amortized into the cost of product sales over its estimated useful life, which has historically been between three to ten years.

***Goodwill and Other Intangible Assets***

In accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*, we do not amortize goodwill and intangible assets with indefinite useful lives. We use the purchase method of accounting for our acquisitions and record goodwill that represents the difference between the purchase price and the fair value of the identifiable tangible and intangible net assets acquired. This goodwill has been subjected to annual reviews for indicators of impairment. During our annual review for impairment in 2006 there were no material events or changes in circumstances to indicate that the carrying amount of our goodwill might not be recoverable.

In the fourth quarter of 2005, under the first step of the SFAS 142 analysis we determined that the carrying value of the reporting unit that included Epoch was in excess of its fair value. Therefore, we were required to

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

proceed to the second step of the SFAS 142 analysis for the Epoch reporting unit and use the methodology described in SFAS No. 141, *Business Combinations*, to determine the fair value of the reporting unit as if we purchased the reporting unit on October 1, 2005. The fair value was based on a combination of the income approach, which estimates the fair value based on the future discounted cash flows, and the market approach, which estimates the fair value based on comparable market prices. Under the income approach, we assumed a cash flow period through 2010 with terminal values thereafter, long-term annual revenue growth rates of 5% to 43%, a discount rate of 20% and terminal value growth rates of 5%. We determined the fair value by weighting 67% to the income approach and 33% to the market approach. The resulting fair value of the Epoch reporting unit was approximately $26.6 million. Therefore, we incurred a non-cash impairment charge to our goodwill of $59.0 million during the fourth quarter of 2005.

***Impairment of Long-Lived Assets***

Quarterly we assess our long-lived assets (excluding goodwill) for indicators of impairment using the methodology prescribed in SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*. During our assessments, if there are indicators of impairment related to our long-lived assets, we are required to determine that the carrying value of the assets can be recovered through undiscounted future cash flows. If the carrying value of the asset can not be recovered, we are required to write down the value of the long-lived asset to its fair value.

***Common Stock Warrant Liability***

As a result of our December 2004 acquisition of Epoch, we assumed warrants for 381,317 shares of our common stock. The warrants have an exercise price of $8.32 per share and expire in early 2009. The warrants have a provision that allows them to be redeemed for cash based on the Black-Scholes formula under certain circumstances if there is a change of control of Nanogen. However, the volatility variable in the Black-Scholes formula is limited to the lesser of 50% or our actual historical volatility. Using the methodology prescribed in Emerging Issues Task Force ( EITF ) 00-19, *Accounting for Derivative Financial Instruments Indexed To, and Potentially Settled In a Company s Own Stock*, we recorded a current liability for the fair value of the cash redemption feature of the warrants. The valuation of the warrants and the corresponding liability is re-measured quarterly, in accordance with the terms of the warrant, until the warrants are exercised or expire.

The assumptions used in the Black-Scholes pricing model were:

| | December 31, 2006 | December 31, 2005 |
|---|---|---|
| Expected term | 2.2 years | 3.2 years |
| Interest rate | 4.8% | 4.5% |
| Volatility | 50% | 50% |
| Dividends | | |
| Calculated cash redemption value of the warrants | $ 11,000 | $ 86,000 |

The decrease in the market price of our common stock and other changes in the Black-Scholes formula s variables from December 31, 2005 to December 31, 2006 resulted in a $75,000 decrease in the value of the warrants. We reported $75,000 and $1.0 million in income as a warrant valuation adjustment in our statement of operations for the years ended December 31, 2006 and 2005, respectively. In the year ended December 31, 2004 we reported $74,000 in expense as a warrant valuation adjustment.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

***Research and Development***

Cost incurred in research and development activities are expensed as incurred.

***Revenue Recognition***

We generate revenue through our product sales, license and royalty fees, and sponsored research, contracts and grants with third parties. We recognize revenue only after all of the following criteria are met: i) there is persuasive evidence of an arrangement, ii) delivery has occurred or services have been rendered, iii) the price is fixed and determinable, iv) collectibility is reasonably assured, and v) both the title and the risks and rewards of ownership are transferred to an unrelated third party. In addition, we apply the prescribed methodology in EITF Issue No. 00-21, *Accounting for Revenue Arrangements with Multiple Deliverables*, ( EITF 00-21 ) to evaluate our revenue arrangements to determine if it involves more than one deliverable and, if so, how the arrangement s consideration should be measured and allocated to revenue.

*Product sales*

We sell our commercial products under various sales programs directly to end users and through various distribution channels. Our product sales include our molecular testing platforms and related consumables, Analyte-Specific Reagents ( ASRs ), real time polymerase chain reaction ( PCR ) reagent products and point-of-care diagnostic tests.

We sell molecular testing platforms as either (i) a direct sale or (ii) under a reagent rental arrangements.

(i) Direct sales

We recognize revenue from the direct sale of molecular testing platforms to end users or distributors after we receive a purchase order, have shipped the instrument and title has passed to the customer (f.o.b. shipping point in the United States or Delivery Duty Paid at the customer s site in Europe) and collection is reasonably assured. In transactions where a right-of-return exists, revenue is deferred until acceptance has occurred and the period for the right-of-return has lapsed. The cost of product sales related to a sold instrument are recorded in the period in which the corresponding revenue is recognized.

(ii) Reagent rental arrangements

A reagent rental/cost per test arrangement occurs when we provide a customer a molecular testing platform in return for a contractual arrangement where the customer is required to purchase a minimum number of consumables, at set prices, within a certain time-frame. When a reagent rental arrangement is consummated, the value of the molecular testing platform is reclassified from inventory to fixed assets and the cost of the system is amortized to the cost of product sales over the period of the contractual arrangement. We recognize revenue when the consumables are shipped under the terms of the arrangement.

We provide product warranty coverage for our molecular testing platforms. The warranty periods are generally for one year for direct sales. Molecular testing platforms sold to distributors are sold without warranty coverage. The fair value of the warranty is recorded as deferred revenue and recognized ratably over the warranty period. The fair value of the warranty is determined by the renewal price for a maintenance contract on similar equipment and is consistent for all customers.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

Revenue from ASRs, real time PCR reagent products and point-of-care diagnostic tests is recognized when we receive a purchase order, have shipped the product and title has passed to the customer (f.o.b. shipping point in the United States or Delivery Duty Paid at the customer s site in Europe) and collection is reasonably assured. In transactions where a right-of-return exists, we defer our revenue recognition until the customer has accepted our product and the right-of-return period has lapsed.

*License and royalty fees*

We apply the prescribed methodology in EITF 00-21 to evaluate our license and royalty fee contracts to determine if these contracts involve more than one identifiable deliverable. We then determine the fair value of each identified deliverable in the contract. Any cash payments received before the identified deliverable is provided to the licensee are recorded as deferred revenue. As each deliverable is provided to the licensee, we recognize the fair value of the deliverable as revenue. Often the useful life of the technology transferred is not explicitly written in the license and royalty fee contract and we are required to estimate the useful life of the technology transferred to ratably recognize revenue over this period. We believe that cash payment streams are one of the primary indicators of our customer s perceived useful life of the technology transferred; therefore, we recognize revenue during this period of time unless there are other contrary indicators in the license and royalty contract. In addition, as they are determinable under contract we recognize minimum payments on an accrual basis.

Royalty payments that are based on product sales by the licensees are generally not determinable until the licensee has completed their internal computations of the royalties due and/or remitted their cash payment. Therefore, we will recognize revenue tied to third party sales on an accrual basis if information is available to enable us to accurately estimate the royalty due to us. In certain situations we may not be able to receive information on licensee product sales on a timely basis that will allow us to reasonably estimate the amount of royalty revenue to be recognized in the quarter the third party sales took place. We will not recognize this royalty revenue until we are able to ensure that we have reliable information, which maybe in a subsequent period. Therefore, we could experience fluctuations in revenues from quarter to quarter depending on the timing of the receipt of third party sales reports or cash payments.

*Sponsored research, contract and grant revenue*

We earn revenue for performing tasks under research agreements with both private enterprises and governmental agencies. Sponsored research, contract and grant revenue is recorded as the costs and expenses to perform the research are incurred. Continuation of certain sponsored research, contracts and grants are dependent upon our achievement of specific contractual milestones. Milestone payments are recognized as revenue upon meeting the following criteria: i) we have achieved a specified milestone and have earned the milestone payment, ii) the milestone is substantive in nature and the achievement of the milestone was not reasonably assured at the inception of the agreement, iii) the fees are non-refundable, and iv) the collection of the payment is reasonably assured. In circumstances where funding is provided on a contractually scheduled basis, revenue is recorded ratably over the term of the arrangement. Any payments received in advance or prior to satisfying our revenue recognition criteria are recorded as deferred revenue in the balance sheet.

***Comprehensive Income (Loss)***

The prescribed methodology in SFAS No. 130, *Reporting Comprehensive Income*, requires all components of comprehensive income (loss), including net income (loss), be reported in the financial statements in the period in which they are recognized. Comprehensive income (loss) is defined as the change in equity of a business

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

enterprise during a period from transactions and other events and circumstances from non-owner sources, including foreign currency translation adjustments and unrealized gains and losses on marketable securities. We present other comprehensive income (loss) in our consolidated statements of stockholders equity.

***Net Loss Per Share***

We used the prescribed methodology in SFAS No. 128, *Earnings Per Share*, to compute our net loss per share. Basic per share data is computed by dividing income (loss) available to common stockholders by the weighted average number of common shares outstanding during the period. Diluted per share data is computed by dividing net income (loss) available to the common stockholders by the weighted average number of common shares outstanding during the period increased to include, if dilutive, the number of additional common share equivalents that would have been outstanding if potential common shares had been issued using the treasury stock method. The weighted average common number of shares outstanding during the period excludes stock options and restricted stock.

Due to our net losses, we have excluded all potentially dilutive securities from the calculation of diluted loss per share attributable to common stockholders during the years ended December 31, 2006, 2005 and 2004, as their effect would be anti-dilutive. The number of potentially dilutive stock options, restricted stock and warrants that have been excluded from the computation of diluted net loss per share are as follows:

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2006 | 2005 | 2004 |
| Stock options and restricted stock | 9,388,980 | 7,229,499 | 6,188,672 |
| Warrants outstanding | 2,157,042 | 2,472,905 | 1,558,328 |
| | 11,546,022 | 9,702,404 | 7,747,000 |

***Adoption of SFAS 123(R), Share-Based Payment***

Prior to January 1, 2006, we accounted for stock awards under the intrinsic value method, which followed the recognition and measurement principles of Accounting Principles Board (APB) Opinion No. 25, *Accounting for Stock Issued to Employees*, and its related Interpretations, as permitted by FASB No. 123, *Accounting for Stock-Based Compensation*. The intrinsic value method of accounting resulted in compensation expense for restricted stock and restricted stock unit issuances to employees at their estimated fair value on the date of grant based on the number of shares granted and the quoted price of our common stock. The intrinsic value method resulted in compensation expense for stock options issue to employees to the extent the option s exercise price was set below the market price on the date of grant. Also, to the extent stock awards were subject to an exchange offer, other modifications, or performance criteria, such awards were subject to variable accounting treatment. To the extent stock awards were forfeited prior to vesting, the corresponding previously recognized expense was reversed as an offset to operating expenses. In addition, prior to our adoption of SFAS 123R, we did not record any compensation expense associated with our Employee Share Purchase Plan (ESPP).

As of January 1, 2006, we adopted SFAS 123R, Share-based Payment (SFAS 123R) using the modified prospective method of recognition of compensation expense related to share-based payments. Our consolidated statement of operations for the year ended December 31, 2006 reflects the impact of adopting SFAS 123R. In accordance with the modified prospective transition method, our consolidated statements of operations for the years ended December 31, 2005 and 2004 have not been restated to reflect, and do not include, the impact of SFAS 123R.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

We are required to measure the compensation cost for all stock awards at fair value on the date of grant and recognize the associated compensation expense over the service period for the awards that are expected to vest. The fair value of restricted stock and restricted stock unit grants are determined on the date of grant, based on the number of shares granted and the quoted price of our common stock. To determine the fair value of stock option awards SFAS 123R requires companies to use an option-pricing model. We determined the fair value of our stock option grants using the Black-Scholes valuation model, which is consistent with the valuation techniques utilized for our stock option footnote disclosures required under SFAS No. 123, *Accounting for Stock Based Compensation*, as amended by SFAS No. 148, *Accounting for Stock-Based Compensation Transition and Disclosure*. The associated fair value of the awards is recognized as an expense over the service period, net of estimated forfeitures. The estimation of stock awards that will ultimately vest requires significant judgment, and to the extent actual results or updated estimates differ from our current estimates, such amounts will be recorded as a cumulative adjustment in the period the estimates are revised. When estimating expected forfeitures we consider the type of awards and our historical experience. Actual results, and future changes in estimates, may differ substantially from our current estimates. In addition, we are required to calculate, as of the date of grant, the fair value of the ESPP shares issued to our employees and record this cost as compensation expense over the vesting period.

On March 29, 2005, the SEC published Staff Accounting Bulletin ( SAB ) No. 107, which provided the Staff s views on a variety of matters relating to stock-based payments. SAB 107 requires stock-based compensation expense to be classified in the same expense line items as the employee s cash compensation.

*Pro Forma Information under SFAS No. 123 before January 1, 2006*

In accordance with the modified prospective transition method, our consolidated statements of operations for the years ended December 31, 2005 and 2004 have not been restated to reflect, and do not include, the impact of SFAS No. 123R. We used the intrinsic value-based method as prescribed by Accounting Principles Board ( APB ) Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations that includes FASB Interpretation No. 44, *Accounting for Certain Transactions involving Stock Compensation an interpretation of APB Opinion No. 25* (collectively APB 25 ) to account for our stock option plans. Using the intrinsic value methodology, no compensation expense is recorded if the exercise price of the stock option equals the market price on the date of grant. If the exercise price of the stock option grant is below the market price on the date of grant, the difference between the market price and exercise price is recorded as a compensation expense on a straight-line basis over the stock option s vesting period. We use the prescribed methodology in SFAS No. 123, *Accounting for Stock-Based Compensation* as amended by SFAS No. 148, *Accounting for Stock-Based Compensation Transition and Disclosure*, to account for our employee stock-based compensation plans. As permitted by SFAS 123, we have elected to continue to apply the intrinsic value-based method of APB 25 while adopting the disclosure requirements of SFAS 123 and SFAS 148.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

The weighted average estimated fair values of stock options granted and stock issued under the employee stock purchase plan during the year ended December 31, 2005 and 2004 was $2.57 and $3.95 per share, respectively. To determine the fair value of the stock options we granted to our employees we used the following assumptions as inputs into the Black-Scholes option-pricing model:

| | Stock Options For the years ended December 31, | |
|---|---|---|
| | 2005 | 2004 |
| Expected term | 5 years | 5 years |
| Interest rate | 4.5% | 3.6% |
| Volatility | 59% | 93% |
| Dividend yield | 0% | 0% |

| | Employee Stock Purchase Plan For the years ended December 31, | |
|---|---|---|
| | 2005 | 2004 |
| Expected term | 6 months | 6 months |
| Interest rate | 4.5% | 3.6% |
| Volatility | 59% | 93% |
| Dividend yield | 0% | 0% |

Had we elected to record compensation expense for option grants as prescribed by SFAS 123 in 2005 and 2004 our pro forma net loss, and pro forma loss per share would have been as follows:

| | For the years ended December 31, | |
|---|---|---|
| | 2005 | 2004 |
| | (In thousands, except per share data) | |
| Net loss: | | |
| As reported | $ (96,494) | $ (38,907) |
| Add: Stock based employee compensation expense included in reported net income (loss), net of related tax effects | 376 | |
| Deduct: Total stock based employee compensation expense determined under Black-Scholes method for all awards, net of related tax effects | (5,376) | (4,482) |
| Pro forma net loss | $ (101,494) | $ (43,389) |
| Basic and diluted loss per common share: | | |
| As reported | $ (1.95) | $ (1.21) |
| Pro forma | $ (2.05) | $ (1.35) |

Periodically, we issue options to non-employees. The options are recorded at their fair values (using the Black-Scholes option-pricing model) as determined in accordance with SFAS 123 and periodically re-measured as prescribed by EITF 96-18 *Accounting for Equity Instruments That*

*Are Issued To Other Than Employees for Acquiring, or in Conjunction with Selling, Goods, or Services*, and are recognized over the related service period.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

***Warranty***

All of our products are sold without a warranty, with the exception of our microarray instrumentation platforms. The microarray instrumentation platforms warranty period is generally for one year from the date sold to an end customer. Microarray instrumentation platforms sold to distributors are typically sold without warranty coverage. We estimate our warranty obligations by analyzing our historical warranty costs. The estimated warranty obligation is recognized at the time of sale and amortized to the cost of product sales over the service period. Should actual costs differ from our estimated warranty obligations, we will revise the estimated warranty liability. In addition, we have costs associated with an in-house service function that is charged to cost of products sales in the period it is incurred.

***Foreign Currency***

The functional currency for our Canadian and Netherlands subsidiaries is the U.S. dollar. The functional currency for our Italian subsidiary, our variable interest entity, and majority owned German subsidiary is the Euro. Their accounts are translated from the euro to the U.S. dollar using the current exchange rate in effect at the balance sheet date for balance sheet accounts, and using the average exchange rate during the period for revenues and expense accounts. The effects of translation are recorded in accumulated other comprehensive income in the consolidated financial statements included herein. In certain instances, our subsidiaries conduct business with customers and vendors in euros or in other local European currencies. Exchange gains and losses arising from these transactions are recorded using the actual exchange rate differences between the date of the transaction and the date of settlement.

***Segment Information***

SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information*, ( SFAS 131 ) prescribes the methodology for reporting information on operating segments in interim and annual financial statements. SFAS 131 requires segment information to be reported using the same methodology we use to internally evaluate the operating performance of our company. As of December 31, 2006, we identified two reporting units for purposes of our goodwill testing; however, our chief operating decision-maker evaluates operating results on an aggregate basis as a single operating segment: advanced diagnostics.

***Recent Accounting Pronouncements***

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements*. This statement clarifies the definition of fair value, establishes a framework for measuring fair value, and expands the disclosures on fair value measurements. SFAS 157 is effective for fiscal years beginning after November 15, 2007. We have not determined the effect, if any, the adoption of this statement will have on our results of operations or financial position.

In July 2006, the Financial Accounting Standards Board ( FASB ) adopted FASB Interpretation No. 48 *Accounting for Uncertainty in Income Taxes* ( FIN 48 ). FIN 48 prescribes a recognition threshold and measurement attribute for financial statement recognition of positions taken or expected to be taken in income tax returns. Only tax positions meeting a more-likely-than-not threshold of being sustained are recognized under FIN 48. FIN 48 also provides guidance on derecognition, classification of interest and penalties and

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

accounting and disclosures for annual and interim financial statements. FIN 48 is effective for fiscal years beginning after December 15, 2006. The cumulative effect of the changes arising from the initial application of FIN 48 is required to be reported as an adjustment to the opening balance of retained earnings in the period of adoption. We do not believe that the adoption of this statement will have a material impact on its financial condition, consolidated results of operations or cash flows.

**3. Financial Statement Details**

***Short-term Investments***

Short-term investments consisted of the following as of at December 31 (in thousands):

| | Amortized Cost | Unrealized Gain | Unrealized Loss | Market Value |
|---|---|---|---|---|
| **2006** | | | | |
| Corporate debt securities | $ 7,823 | $ | $ (1) | $ 7,822 |
| Euro dollar bonds | 2,500 | | | 2,500 |
| Auction rate securities | 2,100 | | | 2,100 |
| Certificate of deposit | 1,501 | | | 1,501 |
| | $ 13,924 | $ | $ (1) | $ 13,923 |

| | Amortized Cost | Unrealized Gain | Unrealized Loss | Market Value |
|---|---|---|---|---|
| **2005** | | | | |
| Corporate debt securities | $ 9,106 | $ | $ (11) | $ 9,095 |
| Euro dollar bonds | 2,717 | | (3) | 2,714 |
| Auction rate securities | 12,380 | 1 | | 12,381 |
| Certificate of deposit | 2,000 | | (5) | 1,995 |
| | $ 26,203 | $ 1 | $ (19) | $ 26,185 |

The following table shows the gross unrealized losses and fair values of our investments in individual securities that have been in an unrealized loss position not believed to be other than temporary, aggregated by investment category, at December 31, 2006 (in thousands):

| | Less than 12 months temporary impairment | | |
|---|---|---|---|
| | Number of Investments | Market Value | Unrealized Loss |
| **2006** | | | |
| Corporate debt securities | 8 | $ 7,822 | $ (1) |
| Euro dollar bonds | 3 | 2,500 | |
| Auction rate securities | 2 | 2,100 | |

| | | | | |
|---|---|---|---|---|
| Certificate of deposit | 2 | 1,501 | | |
| | | $ 13,923 | $ | (1) |

We believe that the decline in value is temporary and related to the change in market interest rates since purchase. The decline is not related to any company or industry specific event,. We anticipate a full recovery of amortized cost with respect to these securities at maturity or sooner in the event of a change in the market interest rate environment.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

The entire balance of available for sale securities matures in one year or less.

We had no net realized losses from the sale of securities for the years ended December 31, 2006 and 2005.

***Receivables***

Receivables are comprised of the following (in thousands) as of:

| | December 31, | |
|---|---|---|
| | **2006** | **2005** |
| Product | $ 10,240 | $ 1,119 |
| License fees | 1,369 | 1,034 |
| Contract and grant | 142 | 58 |
| | 11,751 | 2,211 |
| Allowance for doubtful accounts | (183) | (70) |
| | $ 11,568 | $ 2,141 |

***Inventories***

Inventories consist of the following (in thousands) as of:

| | December 31, | |
|---|---|---|
| | **2006** | **2005** |
| Raw materials | $ 5,190 | $ 3,168 |
| Work in process | 2,308 | 2,233 |
| Finished goods | 5,061 | 3,704 |
| | 12,559 | 9,105 |
| Reserve for excess and obsolescence | (4,868) | (5,381) |
| | $ 7,691 | $ 3,724 |

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

***Property and Equipment***

Property and equipment consist of the following (in thousands) as of:

| | Estimated Useful Life (in-years) | December 31, 2006 | December 31, 2005 |
|---|---|---|---|
| Scientific equipment | 5 | $ 11,061 | $ 10,998 |
| Office furniture and equipment | 3-5 | 4,697 | 4,530 |
| Manufacturing equipment | 5 | 4,755 | 1,240 |
| Leasehold improvements | (lesser of lease term or life of improvements) | 7,365 | 7,336 |
| | | 27,878 | 24,104 |
| Less accumulated depreciation and amortization | | (18,490) | (16,514) |
| | | $ 9,388 | $ 7,590 |

For the years ended December 31, 2006, 2005, and 2004, depreciation and amortization expense related to property and equipment totaled $3.4 million, $2.7 million, and $3.1 million, respectively.

***Acquired Technology Rights***

Acquired technology rights consist of the following (in thousands) as of:

| | Life | December 31, 2006 | | | December 31, 2005 | | |
|---|---|---|---|---|---|---|---|
| | | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount |
| Trade names and other intangible assets | 1-8 years | $ 521 | $ (69) | $ 452 | $ | $ | $ |
| In-licensed technology rights | 3-10 years | 6,069 | (5,650) | 419 | 6,033 | (5,463) | 570 |
| Customer contracts acquired | 7 years | 4,181 | (844) | 3,337 | 1,210 | (173) | 1,037 |
| Completed technology acquired | 3-10 years | 17,039 | (3,647) | 13,392 | 9,395 | (1,398) | 7,997 |
| Total acquired technology rights | | $ 27,810 | $ (10,210) | $ 17,600 | $ 16,638 | $ (7,034) | $ 9,604 |
| Intangible assets not subject to amortization: | | | | | | | |
| Trademarks & trade names | | | | $ 294 | | | $ 294 |

The amortization expense of intangibles assets for the years ended December 31, 2006, 2005 and 2004 was $3.4 million, $2.1 million and $1.3 million, respectively. In the year ended December 31, 2006 and 2005, we recognized $29,000 and $167,000, respectively of impairment charges

related to our inability to utilize certain in-licensed technology rights.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

Estimated amortization of intangibles (in thousands) for the years ended December 31:

| | |
|---|---|
| 2007 | $ 3,394 |
| 2008 | 3,227 |
| 2009 | 3,118 |
| 2010 | 2,639 |
| 2011 | 2,483 |
| Thereafter | 2,739 |
| | $ 17,600 |

***Accounts Payable and Accrued Liabilities***

Accounts payable and accrued liabilities are comprised of the following (in thousands) as of:

| | December 31, 2006 | 2005 |
|---|---|---|
| Accounts payable | $ 3,454 | $ 1,262 |
| Accrued compensation and benefits | 2,943 | 1,418 |
| Other | 6,998 | 5,048 |
| | $ 13,395 | $ 7,728 |

***Other long-term liabilities***

Other long-term liabilities are comprised of the following (in thousands) as of:

| | December 31, 2006 | 2005 |
|---|---|---|
| Jurilab s long-term liabilities | $ 922 | $ 1,018 |
| Deferred rent | 777 | 776 |
| Other | 605 | |
| | $ 2,304 | $ 1,794 |

**4. Business Combinations**

We completed the following acquisitions during the year ended December 31, 2006 that were accounted for under the purchase method of accounting:

***Spectral Diagnostics Inc.***

On February 6, 2006, we completed the acquisition of the rapid cardiac immunoassay test business from Spectral Diagnostics Inc. ( Spectral ) for approximately $4.8 million in cash and 975,193 shares of our common stock with a fair value of approximately $2.9 million. Based in Toronto, Canada, the rapid cardiac immunoassay test business includes a portfolio of point-of-care tests such as the Cardiac STATus® and Decision Point product lines, the i-Lynx reader, related intellectual property and manufacturing capabilities. This acquisition provided us a fully integrated point-of-care group with resources and capabilities in manufacturing, and sales and

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

marketing with a worldwide distribution network to compete in the point-of-care market. These factors were among those that contributed to a purchase price resulting in the allocation of $1.4 million in goodwill. Goodwill represents the excess purchase price over the fair value of the net tangible and intangible assets acquired, and is not deductible for tax purposes.

To determine the value of the 975,193 shares of common stock provided to Spectral, we used the prescribed methodology in EITF 99-12, *Determination of the Measurement Date for the Market Price of Acquirer Securities Issued in a Purchase Business Combination.* We used the quoted market price a few days before and after the number of shares to be exchanged in the acquisition was agreed to and announced (February 6, 2006). Therefore, we valued these shares at $2.98 per common share. In addition, because we were unable to register these issued shares with the Securities and Exchange Commission within fifteen days of the closing of the acquisition, we triggered a cash settlement provision in the purchase agreement. Therefore, we were required to provide Spectral a cash settlement for the difference between their realized sales price of the common stock above $2.26 and below $3.01 per share. On April 3, 2006, Spectral sold our common stock at an average price of $2.80 per share and under the cash settlement provision we were required to pay them $210,000 in cash which was offset by certain agreed upon closing settlements. The results of operations of Spectral have been included in the accompanying consolidated financial statements from the date of acquisition on February 6, 2006. The purchase consideration was as follows (in thousands):

| | |
|---|---|
| Nanogen common stock exchanged | $ 2,906 |
| Cash payment | 4,755 |
| Direct transaction costs | 1,230 |
| Total purchase price | $ 8,891 |

The allocation of the above purchase price was as follows (in thousands):

| | |
|---|---|
| Accounts Receivable | $ 230 |
| Inventory | 1,416 |
| Fixed assets | 596 |
| Tangible assets acquired | 2,242 |
| Intangible assets | |
| Completed technology | 4,143 |
| Distributor relationships | 810 |
| Trade name | 270 |
| Backlog | 24 |
| Goodwill | 1,402 |
| Total assets acquired | 8,891 |
| Liabilities assumed | |
| Net assets acquired | $ 8,891 |

We used valuation techniques comparable with others in the high technology industry. We evaluated the technology acquired from Spectral in accordance with FASB Interpretation No. 4, *Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method,* and determined there was no IPR&D.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

In addition, as part of the acquisition, we acquired a commitment to lease Spectral s manufacturing and administrative facilities through February 2007 for approximately $308,000 with an option to extend the lease until July 2007. We believe this approximates current market lease rates for comparable properties.

*Amplimedical, S.p.A.*

Effective May 1, 2006, we completed the acquisition of the diagnostics division of Amplimedical S.p.A. ( Amplimedical ), which is a manufacturer and distributor of molecular diagnostic products based in Italy, for $9.9 million, consisting of approximately $2.1 million for the issuance of a letter of credit, securitized by restricted cash, approximately $6.9 million in a promissory note issued by us, and approximately $0.9 million in transaction costs. The promissory note was convertible into shares of our common stock. On June 30, 2006, we paid the promissory note in full by issuing Amplimedical 2,886,935 shares of our common stock at a conversion price of $2.63 per share and incurred no interest charges. Based in Italy, Amplimedical has been active in the European and other markets since the early 1990s with its molecular diagnostic reagents. Nanogen and Amplimedical have shared a business relationship for approximately five years, during which time Amplimedical has been a distributor of Nanogen s NanoChip® Molecular Biology Workstation and NanoChip® 400 instrument systems in Italy. We believe this acquisition will allow our molecular diagnostics business to further expand in Europe by providing additional resources and scale. These factors were among those that contributed to a purchase price resulting in the preliminary allocation of $0.7 million in goodwill. Goodwill represents the excess purchase price over the fair value of the net tangible and intangible assets acquired.

The results of operations of Amplimedical have been included in the accompanying consolidated financial statements from the date of acquisition on May 1, 2006. The preliminary purchase price of the acquisition has been recorded as follows (in thousands):

| | |
|---|---|
| Promissory note (converted to Nanogen common stock effective June 30, 2006) | $ 6,939 |
| Issuance of a letter of credit to secure final payment due in 2007 | 2,061 |
| Direct transaction costs | 945 |
| Total purchase price | $ 9,945 |

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

The preliminary allocation of the above purchase price is as follows (in thousands):

| | |
|---|---|
| Cash | $ 63 |
| Inventory | 1,441 |
| Fixed assets | 2,718 |
| Tangible assets acquired | 4,222 |
| Intangible assets: | |
| Completed technology | 3,374 |
| Distributor and customer relationships | 2,161 |
| Trade name | 354 |
| Goodwill | 722 |
| Total assets acquired | 10,833 |
| Liabilities assumed | (888) |
| Net assets acquired | $ 9,945 |

We used valuation techniques comparable with others in the high technology industry. We evaluated the technology acquired from Amplimedical in accordance with FASB Interpretation No. 4 , *Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method,* and determined there was no IPR&D. The final purchase price will be determined in 2007 when the remaining contractual purchase adjustment period has ended and final payment related to the acquisition has been made by us.

***Pro Forma Information***

The results of operations of Spectral and Amplimedical have been included in our consolidated statements of operations since the completion of the acquisitions on February 6, 2006 and May 1, 2006, respectively. The following unaudited pro forma information presents a summary of the results of our operations assuming the acquisitions of Spectral and Amplimedical occurred on January 1, 2005 (in thousands, except per share data):

| | For the year ended December 31, (unaudited) | |
|---|---|---|
| | **2006** | **2005** |
| Revenues | $ 30,316 | $ 27,394 |
| Net loss | (49,451) | (100,403) |
| Loss per share (basic and diluted) | $ (0.76) | $ (1.88) |

**5. Commitments and Contingencies**

***Assigned royalty interests***

In September 2006, we entered into an agreement to assign certain rights associated with our Applied Biosystems, Inc. ( Applied Biosystems ) royalty agreement from the period of July 2006 through December 2011 to Drug Royalty Trust ( DRT ) for an upfront payment of $20.0 million. Under the agreement, we have guaranteed minimum royalty payments from Applied Biosystems to DRT. If the royalty payments fall below

certain minimums in a given fiscal year, we are required to pay cash to DRT for the difference between the actual royalty payments from Applied Biosystems and the minimums. In addition, if royalty payments from Applied Biosystems are above certain thresholds for a given calendar year we will receive, in cash, a certain percentage of

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

the amount above the threshold. The table below illustrates each fiscal year s minimum undiscounted payment to DRT guaranteed by us:

| Calendar year ending | Minimum payment (in thousands) |
|---|---|
| 2007 | $ 4,300 |
| 2008 | 4,820 |
| 2009 | 5,200 |
| 2010 | 5,410 |
| 2011 | 5,374 |
| Total | 25,104 |
| Less amount representing interest | (6,128) |
| Present value of future minimum obligations | 18,976 |
| Less amount due in one year | (3,447) |
| Long term position of obligation | $ 15,529 |

***Hitachi, Ltd. Purchase Commitment***

We have a manufacturing agreement with Hitachi, Ltd. ( Hitachi ) that requires certain minimum purchase commitments for the second generation multiplexed instrument platforms from Hitachi. As of December 31, 2006, we have commitments to purchase approximately $0.9 million in second generation microarray instrument platforms through December 2007. At December 31, 2006, based upon current and estimated forecasted demand, our purchase commitment with Hitachi is within our projected usage levels.

***Leases***

We lease our facilities and certain equipment under operating lease agreements that expire at various dates through 2012.

At December 31, 2006, minimum annual obligations for operating leases were as follows (in thousands):

| | Operating Leases |
|---|---|
| 2007 | $ 3,121 |
| 2008 | 3,154 |
| 2009 | 3,234 |
| 2010 | 2,329 |
| 2011 | 2,051 |
| Thereafter | 1,154 |
| Total minimum lease payments | $ 15,043 |

Rent expense was $3.3 million, $2.9 million and $1.3 million for the years ended December 31, 2006, 2005 and 2004, respectively. We record rent on a straight line basis on leases that have stated rental increases, and accordingly, as of December 31, 2006 and 2005 we had $777,000 and $776,000, respectively, in deferred rent recorded as a long term liability in the balance sheet.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

*Debt Obligations:*

In December 2006, we obtained a revolving working capital debt facility for up to approximately $5.2 million secured by our Italian accounts receivable. As of December 31, 2006, we had borrowed $2.9 million under this agreement.

We have entered into various debt obligations to provide financing for equipment purchases. As of December 31, 2006, we had approximately $1.1 million of outstanding obligation and approximately $1.7 million of available credit. The interest rates on these notes range from 10.0% to 11.5% per annum with principal and interest due in monthly aggregated payments of approximately $70,000 maturing in 1 to 3 years and are secured by equipment.

In 2004, upon acquisition of Epoch, we acquired obligations relating to financing of equipment purchases. As of December 31, 2006, we have approximately $54,000 outstanding under this acquired obligation.

As of December 31, 2006, the future contractual principal payments of our debt obligations are as follows (in thousands):

| | Debt Obligations |
|---|---|
| 2007 | $ 3,682 |
| 2008 | 420 |
| 2009 | 159 |
| Total minimum debt obligations payments | 4,261 |
| Less amount representing interest | (136) |
| Present value of future minimum debt obligations | 4,125 |
| Less amounts due in one year | (3,590) |
| Long term portion of debt obligations | $ 535 |

The interest expense for the debt obligations for the years ended December 31, 2006, 2005 and 2004 was $113,000, $211,000 and $97,000, respectively.

***Litigation***

We may be subject to potential liabilities under various claims and legal actions that may be asserted. These matters may arise in the ordinary course and conduct of our business, as well as through acquisitions, and some may be covered, at least partly, by insurance. Claim estimates that are probable and can be reasonably estimated are reflected as liabilities and as of December 31, 2006, we have no accrual for any pending claims.

**6. Related Party Transactions**

***FasTraQ, Inc.***

In June 2005, we signed a letter of agreement with FasTraQ, Inc. ( FasTraQ ) for the development of a certain future product. Our Chief Executive Officer and Chairman of the Board, Mr. Birndorf, is a director and an investor in FasTraQ. In October and December 2005 we amended this letter of agreement. As a result of this agreement and related amendments we made an initial non-refundable payment of $500,000 in 2005 to begin the

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

initial development of this product. As of December 31, 2005, we expensed the initial $500,000. In February 2006, we converted this letter of agreement into two executed contracts, a Development and License Agreement and a Collaboration Agreement. In February 2006, we committed to provide FasTraQ up to an additional $500,000 in funding based on certain milestones, of which $200,000 was paid in 2006 and expensed into research and development.

***Consulting Agreement with Board member***

In October 2006, we signed a consulting agreement with Mr. Dreismann, one of our Board members, and the agreement was amended in November 2006. Mr. Dreismann received $20,000 in compensation under this agreement during 2006. Total compensation under the agreement is capped at a maximum of $60,000 over the life of the agreement.

***Leased aircraft***

Our Chief Executive Officer and Chairman of the Board, Mr. Birndorf, owns an aircraft that is leased for business travel by a charter aircraft company. He receives approximately $1,500 per hour for the use of his aircraft when it is leased to outside parties. In the year ended December 31, 2004, we paid approximately $13,000 to this charter aircraft company for the use of his aircraft for business related travel. No similar payments were made in either 2005 or 2006.

***Fisher development agreement***

On August 3, 2006, we entered into research and development collaboration arrangements with Fisher Scientific International Inc., ( Fisher Scientific ) a related party, that owns approximately 5.7 million shares of our common stock, and Athena Diagnostic, a wholly-owned subsidiary of Fisher Scientific. We agreed to share certain technology and patent rights related to the development, manufacture and marketing of new molecular diagnostic products. Under these arrangements, Fisher Scientific has the option to provide up to $10 million in 2007 and 2008 for the research and development of infectious disease and molecular diagnostic tests that will be mutually agreed upon. These arrangements are included in non-binding general agreements, thus the obligation of the parties are subject to further negotiation and final terms of definitive collaboration agreements. On August 9, 2006, we entered into an exclusive distribution agreement with Fisher Scientific. There were approximately $42,000 of sales under this agreement in the year ended December 31, 2006.

**7. Employee Benefit Plans**

***Equity Incentive Plans***

We have multiple stock option plans, including several option plans that were assumed through acquisitions. The stock option plans include: Nanogen s 1993 Stock Option Plan, 1995 Stock Option/Stock Issuance Plan, and 1997 Stock Incentive Plan; SynX s 2001 Stock Option Plan; and Epoch s 1991 Incentive Stock Option, Nonqualified Stock Option And Restricted Stock Purchase Plan, 1993 Incentive Stock Option, Nonqualified Stock Option And Restricted Stock Purchase Plan, and 2003 Stock Incentive Plan. Of these plans, only two have shares available for future grants: Nanogen s 1997 Stock Incentive Plan ( 1997 plan ), and Epoch s 2003 Stock Incentive Plan ( 2003 plan ).

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

As of December 31, 2006, the cumulative amount of shares initially reserved, or subsequently approved by stockholders, for all option plans totaled approximately 16.1 million. Of this amount, outstanding stock options and restricted stock totaled approximately 9.2 million, and approximately 907,000 were available for future grants.

***Active Equity Incentive Plans (Containing Shares Available for Grant)***

In August 1997, the Board of Directors adopted the 1997 Plan, under which, as amended, 12.0 million shares were reserved for issuance. Of this amount, outstanding stock options and restricted stock totaled approximately 7.8 million, and approximately 198,016 were available for future grants as of December 31, 2006. As part of the acquisition of Epoch on December 16, 2004, we assumed Epoch s 2003 Plan. The 2003 Plan had approximately 1.7 million shares reserved for issuance. Of this amount, outstanding stock options totaled approximately 1.2 million and approximately 531,000 were available for future grants as of December 31, 2006. In addition, the 2003 Plan has an evergreen provision that provides for annual increases in the number of shares available for issuance annually on January 1. This increase is based on a percentage of fully diluted outstanding shares; however, it is limited to a maximum annual increase of approximately 350,475 shares. On January 1, 2006, based on Epoch s 2003 Plan s evergreen provision an additional 350,475 options for our common stock became available for grant.

***Stock Option Grants***

Employees vest in stock option awards ratably over the service term, generally between two and four years. Outstanding stock options generally have a term of 10 years from the date of grant. The exercise price of the stock options granted under the plans, have historically been issued at an exercise price equal to the fair market value of our stock on the date of grant. However, our 1997 Plan provides us the ability to issue certain stock options with an exercise price of greater or equal to 85% of the fair market value of our common stock on the date of grant. Stock options expire after a period not to exceed ten years, except in the event of termination, whereupon vested shares must be exercised generally within 90 days under the 1997 Plan and within a time frame specified by the plan administrator (the plan administrator s policy is 90 days) under the Epoch plans, or upon death or disability, where an extended twelve-month exercise period is specified in the 1997 Plan. All of our issued stock options are exercisable only after they vest. The vesting period varies with the type of award.

Approximately 894,500 stock options were granted during the year ended December 31, 2006. The fair value for each stock option granted was estimated at the date of grant using a Black-Scholes option-pricing model, using the following assumptions which are based on type of option award and stratified by employee classification:

| Vesting period | Expected life in years | Risk Free Interest Rate | Volatility | Dividend Yield | Pre-vesting cancellation rate |
|---|---|---|---|---|---|
| Four year vesting period with a one year cliff, thereafter monthly vesting | 4.9-5.4 | 4.35-5.21% | 94.5% | 0% | 14.8% |
| Two year vesting period with a six month cliff, thereafter monthly vesting | 4.7-5.4 | 4.35-5.21% | 94.5% | 0% | 7.4% |
| Four year vesting period with monthly vesting | 5.4-6.2 | 4.35-5.21% | 94.5%-103.45% | 0% | |

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

Expected volatilities are based on the historical volatility of our common stock over the expected life of the grant. The expected life represents the weighted average period of time that grants are expected to be outstanding given the vesting schedules and historical exercise patterns. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option. We do not anticipate paying any dividends in the foreseeable future therefore our dividend yield is zero. The pre-vesting cancellation rates are the percentage of forfeitures expected to occur before the awards vest.

The weighted average estimated fair value of stock options granted during the year ended December 31, 2006 was $1.74. At December 31, 2006, total unrecognized estimated compensation cost related to non-vested stock options granted prior to that date was $5.0 million, which is expected to be recognized over a weighted average period of 1.2 years. In the year ended December 31, 2006, $114,000 in share-based compensation expense was capitalized as inventory overhead.

The following table summarizes stock option activity, in all plans, excluding performance options, through December 31, 2006:

| | Number of Shares | Weighted Average Exercise Price Per Share | Weighted Average Remaining Contractual Term | Aggregate Intrinsic Value ($000) |
|---|---|---|---|---|
| Outstanding at December 31, 2005 | 7,229,499 | $ 5.34 | | |
| Granted | 894,500 | $ 2.29 | | |
| Exercised | (50,539) | $ 1.39 | | |
| Cancelled | (361,230) | $ 5.35 | | |
| Outstanding at December 31, 2006 | 7,712,230 | $ 5.01 | 6.88 | $ 43,349 |
| Vested and Exercisable at December 31, 2006 | 5,901,579 | $ 5.37 | 6.36 | $ 41,486 |

In the year ended December 31, 2006, the total intrinsic value of the stock options exercised was $128,000. In addition, we received $72,000 in cash from our employees for the exercise of these stock options and we recorded no related tax benefits.

Net stock options, after forfeitures and cancellations, granted represented 2.2% of outstanding shares during the year ended December 31, 2006. Total stock options granted represented 2.8% of outstanding shares at December 31, 2006.

***Restricted Stock Units***

On July 29, 2005, we granted 402,250 restricted stock units to certain employees under the 1997 plan at a fair value of $4.40 per restricted stock unit. The restricted stock units have a two year cliff vesting period and will become convertible into our common shares on July 29, 2007. In the year ended December 31, 2006 this resulted in $874,000 in amortization of stock based compensation which is included in loss from operations.

On December 12, 2006, we granted 300,000 restricted stock units to certain employees under the 1997 plan at a fair value of $2.09 per restricted stock unit. The restricted stock units vest monthly through December 2008. In the year ended December 31, 2006 this resulted in $16,000 in amortization of stock based compensation which is included in loss from operations.

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

As of December 31, 2006, we had 686,750 non-vested restricted stock units outstanding with a weighted-average grant date fair value of $3.39 and an aggregated unrecognized compensation expense of $1.1 million.

***Performance options.***

In December 2006, we issued 990,000 performance options with an exercise price of $2.09 to our executives and key members of management. These options, which were the first performance options granted by us, vest when these individuals meets specific performance targets and align the interest of our employees with specific internal goals over a wide-range of the company's operations and have a ten year contractual term. We did not recognize any compensation expense associated with these performance options, because we determined that it was unlikely, with our current resources, these individuals could meet their specific performance objectives within the vesting period. Going forward, we will evaluate the probability of each performance option vesting and, if required, begin expensing the fair value of the award. The grant date fair value of each option was valued at $1.77. As of December 31, 2006, there was no intrinsic value of the options; however, there was an aggregate unrecognized compensation expense of $1.8 million.

***Employee Stock Purchase Plan***

In 1997, the Board of Directors approved the Employee Stock Purchase Plan (ESPP), as amended, under which 1.1 million shares of common stock were authorized for issuance. The ESPP permits eligible employees to purchase shares of common stock, at semi-annual intervals, through periodic payroll deductions. Payroll deductions may not exceed 15% of the employee s base salary subject to certain limitations, and the purchase price will not be less than 85% of the lower of the fair value of the stock at either the beginning of the applicable offering period or the last day of the accumulation period. Each offering period is 24 months, with new offering periods commencing every six months, and an accumulation period is six months in duration. For the year ended December 31, 2006, we issued 171,091 shares under the ESPP plan and recognized approximately $153,000 in stock based compensation expense. At December 31, 2006, approximately 342,641 shares were reserved for future issuance.

***401(k) Plan***

We have a 401(k) defined contribution savings and retirement plan (the Plan ). The Plan is for the benefit of all qualifying employees and permits employees to make voluntary contributions up to a maximum of 20% of their base salary, subject to certain limitations. The Compensation Committee of the Board of Directors ( Compensation Committee ) may, at its sole discretion, approve matching contributions. For the years ended December 31, 2006, 2005 and 2004, the Compensation Committee approved a match in the form of our common stock equal to 25% of employee contributions subject to a four year vesting period from the employee s date of hire. This resulted in approximately $141,000, $209,000 and $159,000 in stock based compensation expense for the years ended December 31, 2006, 2005 and 2004, respectively. On September 8, 2006, we issued 89,803 shares from our treasury stock and 3,124 shares from our 1997 Stock Incentive Plan as a result of this matching contribution.

***Stock Bonus Plan***

In 2002, the Board of Directors adopted, and the stockholders approved, a Stock Bonus Plan (the Bonus Plan ) under which 250,000 shares of common stock were authorized for issuance in the form of restricted shares as a portion of our annual bonuses to employees. The Board of Directors is required to approve all issued shares

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**NANOGEN, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**December 31, 2006**

under the Bonus Plan. There were no shares earned under the Bonus Plan in the years ended December 31, 2006, 2005 or 2004. There are 178,390 shares available for grant as of December 31, 2006.

***Shares Reserved for Future Issuance***

The following shares of common stock, including restricted stock are reserved for future issuance at December 31, 2006:

| | |
|---|---|
| Stock options outstanding | 7,712,230 |
| Performance options outstanding | 990,000 |
| Stock options available for grant | 728,549 |
| Restricted stock units | 686,750 |
| Stock bonus plan | 178,390 |
| Employee stock purchase plan | 342,641 |
| Warrants outstanding | 2,157,042 |
| | 12,795,602 |

Shares reserved for future issuances related to warrants outstanding include:

| Description | Amount | Expiration Date | Exercise Price |
|---|---|---|---|
| Joint venture agreement | 323,850 | 6/08 | $5.61 |
| Private financing in 2003 | 424,243 | 9/08 | $4.75 |
| Private financing in 2005 | 1,020,628 | 9/10 | $4.00 |
| Assumed in acquisitions | 388,321 | 1/7-2/09 | $5.41-8.32 |
| | 2,157,042 | | |

**8. Stockholder Rights Plan**

In 1998, the Board of Directors adopted a Stockholder Rights Plan which provides for a dividend of one Preferred Stock Purchase Right for each share of common stock to stockholders of record on November 30, 1998. Each Right will entitle stockholders to buy one one-thousandth of a share of Series A Participating Preferred Stock at an exercise price of $50.00, subject to antidilution adjustments. The Rights will become exercisable only if a person or group becomes the beneficial owner of 15% or more of the common stock, or commences a tender or exchange offer which would result in the offer or beneficially owning 15% or more of common stock, which is not approved by our Board of Directors. The Board of Directors is entitled to redeem the Rights at $0.01 per Right at any time prior to the public announcement of the existence of a 15% holder. If not earlier terminated or redeemed, the Rights will expire on November 17, 2008.

In 2000, the Board of Directors amended the Rights Plan to allow Citigroup Inc. and its affiliates and associates to acquire the beneficial ownership of up to 25% of the our outstanding common stock without triggering the ability of the our stockholders to exercise the rights governed by the Rights Plan. The Board of Directors required Citigroup to maintain its status as a filer on Schedule 13G with respect to its beneficial ownership of our common stock to take advantage of this exception.

**9. Treasury stock**

In 2002, the Board of Directors authorized a limited stock repurchase program under which we may purchase up to an aggregate of 10% of our outstanding common stock from time to time. We may initiate

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**NANOGEN, INC.**

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**December 31, 2006**

treasury stock purchases during certain periods in the open market or in privately negotiated transactions and discontinue these purchases at any time .

In December 2005, we issued 18,456 shares of common stock to certain employees and withheld the fair value of 5,641 shares for the required payroll taxes in lieu of cash payments to us by the employees. We paid cash to the tax authorities and accounted for the withheld shares as treasury stock. On September 8, 2006, we issued 89,803 shares from our treasury stock and 3,124 shares from our 1997 Stock Incentive Plan as a result of a 401(k) matching contribution.

As of December 31, 2006, we held a total of 416,027 treasury shares at a cost of $771,000.

**10. Income Taxes**

Due to our net loss position for the years ended December 31, 2006 and 2005 we recorded a full valuation allowance against deferred tax assets. There were no components of current or deferred United States federal or state income tax provision for the years ended December 31, 2006, 2005 and 2004; however, a 2006 foreign provision of $249,000 was recorded related to our Amplimedical operations in Italy.

The tax effects of temporary differences that gave rise to significant portions of the deferred tax assets and deferred tax liabilities as of December 31, 2006 and 2005 are as follows (in thousands):

| | 2006 | 2005 |
|---|---|---|
| Deferred tax assets: | | |
| Net operating loss carryforwards | $ 113,370 | $ 101,917 |
| Research and development credits | 13,329 | 12,380 |
| Capitalized research expenses | 13,804 | 16,136 |
| Accrued expenses | 485 | 397 |
| Basis difference in intangibles | 1,056 | 1,556 |
| Basis difference in assets | 2,600 | 1,224 |
| Other, net | 6,748 | 5,539 |
| Total deferred tax assets | 151,392 | 139,149 |
| Valuation allowance for deferred tax assets | (148,553) | (135,565) |
| Net deferred tax assets | 2,839 | 3,584 |
| Deferred tax liabilities: | | |
| Basis difference in intangibles | (2,839) | (3,584) |
| Net deferred tax assets | $ | $ |

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**December 31, 2006**

We have established a valuation allowance against our deferred tax assets due to the uncertainty surrounding the realization of such assets. We periodically evaluate the recoverability of the deferred tax asset. At such time as it is determined that it is more likely than not that deferred assets are realizable, the valuation allowance will be reduced. We have recorded a valuation allowance of $148.6 million as of December 31, 2006 to reflect the estimated amount of deferred tax assets that may not be realized. We increased our valuation allowance by approximately $13.0 million for the year ended December 31, 2006.

Included in the valuation allowance is $34.7 million attributable to deferred tax assets of Epoch and SynX entities acquired during the year ended December 31, 2004. The subsequent recognition of the tax benefit related to these assets will be allocated to reduce goodwill or other non-current intangible assets of the acquired entity when realized.

At December 31, 2006, we have federal, state and foreign net tax operating loss carryforwards of approximately $285.4 million, $109.0 million and $32.6 million, respectively. The difference between the federal and state tax loss carryforwards is primarily attributable to the capitalization of research and development expenses for state tax purposes and 60% percent prior years limitation on state loss carryforwards applicable to tax years ending before December 31, 2004. Federal and California net operating loss carryforwards that expired during 2006 were $6.6 million and $3.7 million, respectively. The federal tax loss carryforwards include $11 million and $9 million of net losses which will expire in 2007 and 2008 respectively, unless previously utilized. The California tax loss carryforwards will continue to expire in 2007, unless previously utilized. The foreign tax loss carryforwards will continue to expire in 2007 unless previously utilized. We also have federal and state research and development tax credit carryforwards of approximately $9.2 million and $6.2 million, respectively, which will continue to expire in 2007 unless previously utilized.

At December 31, 2006, deferred tax assets include excess tax benefits of $3.6 million from share based compensation incurred prior to the adoption of FAS 123R. Upon realization of such benefits, the Company will increase additional paid in capital and reduce taxes payable.

Pursuant to Sections 382 and 383 of the Internal Revenue Code, annual use of our net operating losses and credit carryforwards may be limited due to cumulative changes in ownership of more than 50% over a three-year period. We may be subject to similar limitations on our Canadian losses acquired from SynX. We have not performed a formal analysis to quantify the amount of possible limitations. Currently the net operating losses reflected above have not been reduced by potential limitations, however, a full valuation allowance has been placed on all deferred tax assets and, therefore, there is no material impact on our financial statements.

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**December 31, 2006**

**11. Collaborative Alliances**

***Hitachi, Ltd. Manufacturing Agreement***

In January 2000, we executed an agreement with Hitachi, Ltd., effective as of December 15, 1999, for the full-scale commercial manufacturing and distribution of our microarray instrumentation platform (the NanoChip® System ) in specified research markets. Hitachi, Ltd. has a non-exclusive right to distribute the NanoChip® System s consumables in Japan. Under this arrangement, we receive a royalty for NanoChip® Systems sold by Hitachi, Ltd. in Japan. We retain the right to distribute, directly or through others, NanoChip® Systems outside of Japan. In addition, we manufacture NanoChip® Systems consumables in our San Diego, California facility for distribution worldwide. We also retain the right to form other manufacturing and distribution agreements.

In June 2003, we entered into another manufacturing agreement with Hitachi for the manufacture of the second generation microarray instrumentation platform (the NanoChip400® ). Pursuant to this manufacturing agreement, Hitachi will exclusively manufacture the NanoChip400® for worldwide distribution.

Pursuant to our manufacturing agreements with Hitachi, we are required to provide annual purchase commitments to Hitachi for NanoChip400® Systems. As of December 31, 2006, we had a commitment to purchase approximately $0.9 million in NanoChip400® Systems from Hitachi through December 2007.

***Hitachi, Ltd., Nissei Sangyo Co. Ltd. and Hitachi Instruments Service Co. Ltd.- Research agreement***

In 2000, we executed a research agreement with Hitachi, Ltd., Nissei Sangyo Co. Ltd. and Hitachi Instruments Service Co. Ltd. of Japan (collectively, Hitachi ) to develop, manufacture and distribute potential products based on our proprietary technologies. Pursuant to the terms of the agreement, both of us are required to contribute cash over the period of the agreement toward the research and development efforts. We are required to repay, without interest, 50% of the funding Hitachi has contributed toward the development effort over an indefinite period of time. Repayment amounts are 2% of our gross microarray instrument platform s consumable cartridge sales until the liability is paid in full. At December 31, 2006, we owe approximately $4.9 million to Hitachi which is recorded in other long-term obligations. Using the prescribed methodology in SFAS No. 68, *Research and Development Arrangements* , we recorded sponsored research revenue as reimbursable expenses when incurred. Sponsored research revenue recognized under this agreement totaled $500,000 for the year ended December 31, 2004. We had no revenue under this agreement in the either of the years ended December 31, 2006 or 2005.

In 2003, in accordance with the terms of the agreement, Hitachi exercised its right to terminate the collaborative research agreement. The termination of this agreement did not accelerate the repayment due Hitachi.

***Joint Venture between Aventis Inc. and Nanogen Recognomics GmbH***

In June 2001, we entered into agreements with Aventis Inc. ( Aventis ) to create Nanogen Recognomics GmbH ( Nanogen Recognomics ). This company was established to develop new products and applications for our microarray instrumentation system. Nanogen Recognomics is 60% owned by us and 40% owned by Aventis and was based in Frankfurt, Germany.

In 2004, we and Aventis agreed to reorganize Nanogen Recognomics into a non-operating holding company and discontinue all material business activities. Pursuant to our joint venture agreement we were required to

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assume the reorganization costs. In addition, the joint venture agreement provided us a 10 year exclusive commercialization license to hold the original patents contributed by Aventis and any jointly owned patents and collect royalties, if any.

The results of operations for Nanogen Recognomics are consolidated in our financial statements. Nanogen Recognomics incurred no expenses for the year ended December 31, 2006 and 2005 and $1.3 million in operating expenses in the year ended December 31, 2004. Approximately $946,000 of the total expenses during the year ended December 31, 2004, related to reorganization costs and expenses. These reorganization costs and expenses are reflected as research and development costs. We will expense future reorganization costs as incurred. Such costs are not expected to be material.

We used the prescribed methodology in SFAS No. 52, *Foreign Currency Translation,* and its related interpretations, to determine the functional currency of Nanogen Recognomics is the Euro. As a result of the increasing value of the Euro versus the U.S. Dollar during the period from inception of Nanogen Recognomics through the reorganization, we recorded cumulative unrealized gains on foreign currency translation of approximately $1.2 million upon discontinuance of Nanogen Recognomics material business activity during in the year ended December 31, 2004.

***Princeton BioMeditech Corporation***

Through our acquisition of SynX we were a party to a 2001 development and manufacturing agreement between SynX and Princeton BioMeditech Corporation ( PBM ) to jointly develop and market various point-of-care tests for certain biomarkers and protein targets. We had no revenue under these agreements. As of January 2006, we terminated all of our previous agreements with PBM and superseded them with renegotiated contracts. These renegotiated contracts include a distribution agreement, a manufacturing agreement and a development agreement. There were no payments between us and PBM associated with entering into these new agreements and there were no purchase minimums required between the parties.

We agreed to continue the joint development of a point-of-care instrument that incorporates PBM s proprietary technology, our proprietary reagents and an exclusive license between us and Roche Diagnostics GmbH. PBM is responsible for the development of a reasonably priced instrument that uses our reagents to determine the amount of target NT-proBNP present in a patient. In addition, PBM is required to obtain the regulatory approval of the instrument and will own these approvals. We will fund a certain percentage of the development cost of the instrument, up to an agreed upon maximum amount which is not material to our financial statements. In addition, we are required to develop and manufacture the reagents used in the instrument and supply them to PBM. We also have to conduct the testing of our reagents required to obtain regulatory approval to market and sell them. We will own these regulatory approvals. Further, we will share revenues associated with this point-of-care instrument with the majority of revenues being allocated to the party responsible for selling, marketing and distributing the instrument within a specific geographic territory. Each party will be responsible for its own manufacturing, sales and marketing expenses and both parties are required to provide each other a forecast of expected demand for each others products (reagents or instruments).

We provided PBM with an option to purchase or to receive a nonexclusive license for certain biological markers for the incorporation into a future point-of-care instrument related to congestive heart failure, stroke or traumatic brain injury. We have agreed to negotiate in good faith commercially reasonable terms for such a license or supply arrangement. However, if we are unable to agree upon such terms PBM will pay Nanogen a certain royalty for the use of these markers.

In the year ended December 31, 2006, no purchases were made from PBM.

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***Jurilab LTD***

In a series of investments from July 2005 through June 30, 2006, we invested approximately $3.0 million to purchase 29.7% of the outstanding stock of Jurilab. In addition, we have the option to purchase the entire company at not-to-exceed prices through December 31, 2007. By investing in Jurilab, a development stage research and development company, we gained access to technologies related to certain gene markers. Based on our analysis of the investment agreement, we are the primary beneficiary under FIN 46R, *Consolidation of Variable Interest Entities.* We are the primary beneficiary because our equity investment at risk is not sufficient to permit Jurilab to finance its activities without additional support, we have the direct ability through control of Jurilab s Board of Directors to make decisions about the entity s activities and our equity interest is not proportional to the losses we will take from the research and development expenses. In addition, substantially all of the entity s activities are conducted on our behalf despite our disproportionate ownership percentage. Jurilab s creditors have no recourse against us and our maximum exposure to loss is the extent of our $3.0 million investment in the entity. Conversely, assets recognized as a result of consolidating Jurilab do not represent additional assets that could be used to satisfy claims against our general assets.

Included in our consolidated balance sheet at December 31, 2006 and 2005 were the net liabilities (in thousands) of Jurilab:

| | December 31, 2006 (Unaudited) | December 31, 2005 (Unaudited) |
|---|---|---|
| Cash | $ 743 | $ 77 |
| Restricted cash | 660 | 355 |
| Other assets | 589 | 719 |
| Deferred revenues | (2,639) | |
| Debt obligations | (9,940) | (7,245) |
| Other long-term liabilities | (922) | (1,018) |
| Net liabilities | $ (11,509) | $ (7,112) |

Consolidation of Jurilab s results of operations included the following (in thousands):

| | For the year ended December 31, 2006 (Unaudited) | From July 5, 2005 to December 31, 2005 (Unaudited) |
|---|---|---|
| Net sales | $ 47 | $ 142 |
| Cost of product sales | (108) | (100) |
| Research and development expense | (4,986) | (1,882) |
| Other loss | (332) | (80) |
| Net loss | $ (5,379) | $ (1,920) |

***Pharmacogenetics Diagnostic Laboratory, LLC***

In 2006 and 2005, we purchased $100,000 and $400,000, respectively, in common stock of Pharmacogenetics Diagnostic Laboratory, LLC ( PGx ) a development stage research and development company to provide us access to certain technology related to pharmacogenetics. We conducted a sensitivity analysis that considered both the qualitative and quantitative factors of our initial and potential additional investments in

PGx to consider if we should consolidate PGx as a VIE under FIN 46. We did not consider PGx a

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VIE because we believe it is likely PGx will obtain additional and operating funding from other third parties. Moreover, even if PGx were a VIE, their creditors have no recourse against us and our maximum exposure to PGx s losses is the extent of our investment. Therefore, we will expense PGx s net losses to research and development. Once our investment, which is carried as other long-term assets, is reduced to zero, we will stop recording the results of operations of PGx in our financials. We believe this appropriately reflects the substance of this transaction, which is to fund research and development. For the year ended December 31, 2006 and 2005 we have expensed $154,000 and $125,000, respectively, of PGx s net losses into research and development.

**12. Licensed Technology**

As a result of the SynX acquisition, we gained access to a cross-licensing agreement between Roche Diagnostics, Inc. ( Roche ) and SynX entered into in 2003. We have a non-exclusive world-wide license relating to the development, manufacture and marketing in the field of point-of-care diagnostics of immunoassays that detect the congestive heart failure marker NT-proBNP. As part of the cross-license agreement, we granted Roche a non-exclusive world-wide license on the technology relating to the development, manufacture and marketing of immunoassays that detect the congestive heart failure marker NT-proBNP. The value of the license was included as a component of acquired in-process research and development.

**13. Contract and Grant Revenue**

***U.S. Centers for Disease Control and Prevention***

In December 2006, the U.S. Centers for Disease Control and Prevention (CDC) awarded us a contract to develop a multi-analyte assay for Influenza. This development program is partnered with HX Diagnostics, Inc., which will commercialize the product upon approval. We were awarded $4.5 million to fund the first two phases of a five-phase development project. If all five phases are funded by the CDC, they may provide us up to $12.5 million in funding over the next three years. Revenue is recognized under these grants as expenses are incurred and totaled $194,000 for the year ended December 31, 2006.

***National Institutes of Health (NIH)***

The National Institute of Allergy and Infectious Diseases for the National Institutes of Health (NIH), provides funding for several grants. In July 2002, the Company was awarded a grant which focused on the development of a compact centrifugal micro fluidics based biological warfare agent (BWA) analyzer. In March of 2005 we began phase two of this grant and were awarded an additional $529,000 over a two year period. In May and September 2003, Nanogen was awarded a second and third grant. The second grant is for the development of a dieletrophorectic (DEP) separator for cell/pathogen separation. The third grant is aimed at developing an on-chip real-time DNA amplification for BWA detection. The total awards of these grants totaled approximately $1.5 million over a 4-year period. In July 2005, we were awarded a fourth grant for the diagnosis of Sepsis and community acquired pneumonia for a total of $2.5 million over five years. Revenue is recognized under these grants as expenses are incurred and totaled $998,000, $650,000 and $415,000 for the years ended December 31, 2006, 2005 and 2004, respectively.

***Bill and Melinda Gates Foundation grant***

In July 2005, the University of Washington was awarded a grant from the Bill and Melinda Gates Foundation as lead partner of a consortium, which includes us, to develop a portable device that healthcare workers could pack into remote regions to quickly and easily make life-saving diagnoses. Our portion of this

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grant is anticipated to be approximately $3.6 million. This consortium will concentrate on meeting the need for an affordable portable device to do point-of-care testing and provide rapid results. Our portion of the revenue under this grant totaled $480,000 and $429,000 in the year ended December 31, 2006 and 2005, respectively.

***The National Institute of Justice***

In April 1997, The National Institute of Justice, U.S. Department of Justice provided funding for the development of a chip based genetic detector for rapid DNA-based identification of individuals in an amount totaling approximately $4.4 million over a 9-year period. Revenue totaled $154,000 and $747,000 for the years ended December 31, 2005 and 2004, respectively. The funding for this grant was completed in the year ended December 31, 2005.

**14. Segment, Geographic Sales and Significant Customers**

SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information,* ( SFAS 131 ) prescribes the methodology for reporting information on operating segments in interim and annual financial statements. SFAS 131 requires segment information to be reported using the same methodology we use to internally evaluate the operating performance of our company. As of December 31, 2006 and 2005, we have identified two reporting units for the purpose of our goodwill testing and a limited amount of internal reporting; however, our chief operating decision-maker s strategy is to penetrate the advance diagnostic market segment with our various product lines. Therefore, our chief decision maker views our operating results as a consolidated business and makes strategic operational decisions as if we are operating in a single operating segment.

*Geographic Information*

We have product sales revenue by region as follows for the years ended December 31, (in thousands):

| | 2006 | 2005 | 2004 |
|---|---|---|---|
| Customer Location: | | | |
| United States | $ 6,216 | $ 3,933 | $ 2,058 |
| Europe | 8,606 | 389 | 896 |
| Canada/Mexico | 1,174 | 222 | 226 |
| Total | $ 15,996 | $ 4,544 | $ 3,180 |

Revenue from customers representing 10% or more of total revenue during years ended December 31 is as follows:

| | 2006 | 2005 | 2004 |
|---|---|---|---|
| License fees: | | | |
| Applied Biosystems, Inc. | 23% | 45% | |
| Contract and grants: | | | |
| National Institutes of Health | | | 14% |

**15. Stock transactions**

In September 2005, we sold to institutional investors 6.8 million shares of common stock at $2.94 per share and one million warrants exercisable at $4.00 per share for five years and received approximately $18.8 million, net of expenses, in cash. This offering was conducted under a shelf registration statement filed with the Securities

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**December 31, 2006**

and Exchange Commission in June 2005 that allowed us to raise up to $60.0 million in equity transactions. We were subject to certain restrictions under the stock purchase agreement that limits our ability to raise additional equity until December 31, 2005 unless it is in connection with merger and acquisition activity. After December 31, 2005, we may raise an additional $36.0 million, under the June 2005 shelf registration statement, by issuing some combination of common stock, preferred stock, debt securities or warrants.

In March 2006, we sold approximately 5.7 million shares of our common stock to Fisher Scientific International, Inc. at a price of $2.65 per share, for net proceeds of approximately $15.0 million.

In May 2006, we filed a 462(b) registration statement with the Securities and Exchange Commission to increase our available funding under the June 2005 shelf registration statement by approximately $4.0 million and as a result of this filing we had $25.0 million in equity financing available as of May 2006.

In May 2006, we entered into an equity financing agreement with Azimuth Opportunity Ltd. ( Azimuth ), pursuant to which Azimuth agrees to purchase, subject to certain limitations and closing conditions, up to $25 million of our common stock over the next eighteen months. These purchases will be made pursuant to the June 2005 shelf registration statement. During the eighteen month period, we may, from time to time and at our sole discretion, present Azimuth with draw down notices to purchase our common stock at a price that is calculated pursuant to a pricing matrix over 10 consecutive trading days, or such other period mutually agreed upon by us and Azimuth. We are able to present the investor with up to 24 draw down notices during the term of the agreement, with a minimum of five trading days required between each draw down period. Only one draw down is allowed in each draw down pricing period, unless otherwise mutually agreed upon by us and Azimuth. Once presented with a draw down notice, Azimuth is required to purchase a pro-rata portion of the shares on each trading day during the 10-day trading period on which the daily volume weighted average price for our common stock exceeds a threshold price for such draw down determined by us. The per share purchase price for these shares equals the daily volume weighted average price of our common stock on each date during the draw down period on which shares are purchased, less a discount ranging from 3.8% to 5.8%, based on our market capitalization. Each draw down will be settled on the second trading day following the last trading day of each pricing period. If the daily volume weighted average price of our common stock falls below the threshold price on any trading day during a draw down period, the agreement provides that Azimuth will not be required to purchase the pro-rata portion of shares of common stock allocated to that day. However, at Azimuth s election, Azimuth could buy the pro-rata portion of shares allocated to that day at the threshold price less the discount described above.

The agreement also provides that from time to time and at our sole discretion we may grant Azimuth the right to exercise one or more call options to purchase additional shares of our common stock during each draw down pricing period for the amount that we specify. Upon Azimuth s exercise of the call option, we would sell to Azimuth the shares of our common stock subject to the call option at a price equal to the greater of the daily volume weighted average price of our common stock on the day Azimuth notifies us of its election to exercise its call option or the threshold price for the call option determined by us, less a discount ranging from approximately 3.8% to 5.8%, based on our market capitalization.

On July 11, 2006, under our equity financing agreement with Azimuth we issued 2,524,130 shares at an aggregate purchase price of $4.0 million or approximately $1.58 per share. We received net proceeds of approximately $3.9 million after deducting our offering expenses. On September 20, 2006, under this agreement we issued 833,333 shares at an aggregate purchase price of $1.5 million or approximately $1.80 per share. We received net proceeds of approximately $1.47 million after deducting our offering expenses.

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**December 31, 2006**

**16. Subsequent Events**

On February 2, 2007, we agreed with Azimuth to terminate our equity financing agreement.

On February 5, 2007, we entered into a placement agency agreement with Ascendiant Securities, LLC (Ascendiant) relating to the offering of stock pursuant to an effective shelf registration statement. Under the placement agency agreement, Ascendiant agreed to act as our placement agent in connection with the issuance and sale of our common stock and warrants to purchase shares of common stock, on a best efforts basis, to certain institutional investors. We agreed to pay a placement agent fee in an amount equal to 5% of the gross cash proceeds of the offering. Under this agreement and related purchase agreements with the investors, we sold 4,916,667 shares of our common stock and 983,333 warrants to purchase a share of our common stock for net proceeds of approximately $7.2 million.

**17. Quarterly Financial Data (unaudited)**

Summarized quarterly financial data for the years ended December 31, 2006 and 2005 are as follows (in thousands, except per share data):

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| **2006** | | | | |
| Revenues | $ 4,352 | $ 6,311 | $ 7,505 | $ 8,684 |
| Costs and expenses | 16,428 | 20,233 | 19,039 | 19,645 |
| Loss from operations | (12,076) | (13,922) | (11,534) | (10,961) |
| Net loss | (12,021) | (14,051) | (11,760) | (11,238) |
| Net loss per share basic and diluted[1] | $ (0.21) | $ (0.23) | $ (0.18) | $ (0.17) |
| **2005** | | | | |
| Revenues | $ 3,176 | $ 3,135 | $ 3,171 | $ 3,062 |
| Costs and expenses[2] | 12,418 | 13,090 | 12,219 | 73,140 |
| Loss from operations | (9,242) | (9,955) | (9,048) | (70,078) |
| Net loss | (8,257) | (9,721) | (8,838) | (69,678) |
| Net loss per share basic and diluted[1] | $ (0.17) | $ (0.20) | $ (0.18) | $ (1.27) |

(1) Net loss per share is computed independently for each of the quarters presented. Therefore, the sum of the quarterly net loss per share will not necessarily equal the total for the year.

(2) Includes a $59 million goodwill impairment charge during the fourth quarter of 2005.