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SEQUENOM®

Focused

on

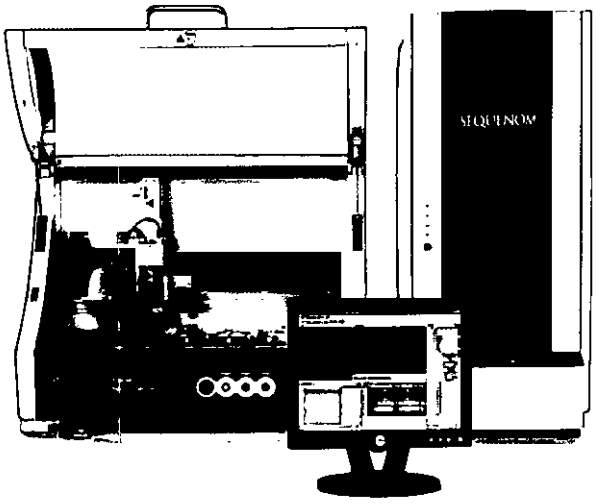
Growth

2006 ANNUAL REPORT

F cus: GROWTH

Except for the historical information contained herein, the matters set forth in this annual report regarding the Company's goals for 2007, building value for stockholders, the Company's future, trends and expectations for its contract research services business, future sales trends, the Company's intentions regarding its MassARRAY technology, near term market evolution for fine mapping genotyping, methylation marker analysis, and gene expression analysis, the Company's diagnostics research, development and commercial planning initiatives, growth opportunities and diagnostic opportunities, the Company's plans and timelines for launching prenatal tests, the value proposition of the Company's IP portfolio, the Company's plans to develop and commercialize non-invasive prenatal genetic tests for use with the MassARRAY system and other platforms, remaining technical hurdles and plans for developing a test for Down syndrome, plans and timelines for expanding into new markets and for new product introductions, the Company's potential, goals, opportunities, impact on, and expectations regarding prenatal molecular diagnostics product development and commercialization, market opportunities and market potential, are forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially, including the risks and uncertainties associated with the Company's operating performance, demand for and acceptance of the Company's products, services, and technologies, new technology and product development and commercialization particularly for new technologies such as non-invasive prenatal diagnostics, reliance upon the collaborative efforts of other parties, research and development progress, competition, government regulation, obtaining or maintaining regulatory approvals, and other risks described from time to time in the Company's SEC (U.S. Securities and Exchange Commission) filings, including the Company's Annual Report on Form 10-K for the year ended December 31, 2006, most recent periodic quarterly report, and other documents subsequently filed with or furnished to the SEC. These forward-looking statements are based on current information that may change and you are cautioned not to place undue reliance on these forward-looking statements which speak only as of the date of this report. All forward-looking statements are qualified in their entirety by this cautionary statement, and the Company undertakes no obligation to revise or update any forward-looking statement to reflect events or circumstances hereafter.

Sequenom focuses on providing genetic analysis products and services that translate genomic science into superior solutions for the biomedical research, molecular medicine, agricultural, and non-invasive prenatal testing markets. Our proprietary MassARRAY® system, comprised of hardware, software applications, and consumable chips and reagents, is a high performance nucleic acid analysis platform that quantitatively and precisely measures genetic target material and variations therein. Our contract research services business provides genetic analysis services to customers as a complement and as an alternative to our systems product offerings. Our research and development efforts are committed to producing new and improved applications for our MassARRAY system that will deliver greater system versatility and also reduce the cost per data point generated. Our research and development efforts are also directed to the development of diagnostic tests, particularly non-invasive prenatal diagnostics, for use on the MassARRAY system and other platforms.



To Our Stockholders, Customers, Suppliers, and Employees,

This past year has been one of reinvigorating and transforming Sequenom into a focused, growing company. The many accomplishments of 2006 resulted from the tireless efforts of Sequenom employees who worked diligently to refocus our activities on customer needs and building for the future. I want to express my personal thanks for their dedication and efforts.

We are proud of our recent accomplishments, yet our goals for 2007 require continued focus to build further value for our stockholders.

In my message to you last year, I indicated that our future must begin by concentrating on our fundamental technology and on customer needs. Our MassARRAY® platform has demonstrated its superiority in the DNA fine mapping space. Compared with other technologies, the MassARRAY platform provides versatility across applications, high sensitivity, and the lowest cost per data point for typical fine mapping genotyping studies.

In 2006 we extended the utility of the MassARRAY platform through the introduction of several new products:

- iPLEX™ Gold Assay: A robust genotyping assay that provides our customers with a routine multiplexing capability of up to 36 to 40 times per reaction, significantly reducing cost per data point;
- EpiTYPER™ Assay: A high-throughput, cost-effective assay for DNA methylation marker pattern analysis; the EpiTYPER Assay has been adopted by many of the world's top cancer research laboratories and hospitals; and
- QGE iPLEX™ Assay: A quantitative, multiplex gene expression assay enabling analyses of up to 25 genes in a single reaction.

During 2006 Sequenom was recognized as having the best fine mapping technology available by many of the world's independent research laboratories. Research papers published in peer-reviewed scientific journals substantiated the advantages of MassARRAY technology, and our platform was specifically mentioned as having higher sensitivity and faster throughput than competing platforms.

Our intention is for MassARRAY technology to become the platform of choice for a wide range of commercial and research testing needs. We believe that the flexibility and cost effectiveness of the MassARRAY system will continue to be demonstrated as the markets for fine mapping genotyping, methylation marker analysis, and gene-expression analysis evolve in the near term.

Based on market demand, at the end of 2005 we expanded our commercial operations to offer customer-specific Contract Research Services. This business showed significant growth during its first full year of operation and the trend is continuing into 2007. We expect to further expand this service as we target continued demand from new and existing customers worldwide.

As part of our global targeting strategy, we have added exclusive distributors in Asia and have reorganized our European sales and marketing efforts. These efforts have resulted in substantial regional growth during the past year and should establish a positive sales trend in the future.

We continue to spend substantial time, effort and investment directed to diagnostics research, development and commercial planning initiatives – initiatives that we believe will lead to significant growth opportunities. Our primary diagnostics focus has been on non-invasive prenatal applications. Research indicates that there is significant unmet need for safe, accurate, and reliable methods for non-invasive prenatal diagnostic testing. We plan to launch our first non-invasive prenatal test this summer through a CLIA-certified partner, a research use only test for Rhesus D incompatibility. We expect to follow later this year with a test for x-linked disorders.

We also continue to in-license and develop our substantial intellectual property (IP) position in non-invasive prenatal diagnostics and have also increased our opportunities in other diagnostic areas by exclusively in-licensing technology relevant to oncology, transplantation and infectious diseases. We are enthusiastic about the expansion of our IP portfolio and the value proposition it represents as we approach commercialization of specific tests in 2007 and as we continue our research and development efforts aimed at delivering additional tests in 2008 and beyond.

Importantly, we have demonstrated technical proof-of-concept for a Down syndrome diagnostic test and, while further validation is required, we are pleased that many technical hurdles have been overcome. Once the remaining technical hurdles are resolved, we expect to move aggressively toward developing a test for Down syndrome that is applicable to broader sections of the population.

Building a proven and experienced management team has also been a significant and successful part of Sequenom's focus. During 2006 Dr. Betty Dragon joined us as Senior Vice President Research and Development, bringing with her more than 25 years of experience, including significant diagnostics product research, development and commercialization experience. Also last year sales professional Mike Monko joined us as Senior Vice President of Sales and Marketing. In 2007 Steve Owings joined us as Vice President of Commercial Development, Prenatal Diagnostics and seasoned financial veteran Paul Hawran joined us as Chief Financial Officer, bringing more than 25 years of experience in biotechnology and pharmaceuticals. Our talent pool is deep, and we are continuing to attract highly qualified technical, sales and industry veterans as our progress accelerates.

Finally we recently completed a $20 million financing. The net proceeds from this financing plus the more than $24 million on hand at 2006 year-end give us significant operational and strategic flexibility and improve our ability to capitalize on opportunities going forward.

I would like to thank our investors, customers, suppliers and employees for their support. We look forward to building further value for all our stakeholders.

Harry Stylli, Ph.D.
PRESIDENT AND CHIEF EXECUTIVE OFFICER

"We are proud of our recent accomplishments, yet our goals for 2007 require continued focus to build further value for our stockholders."

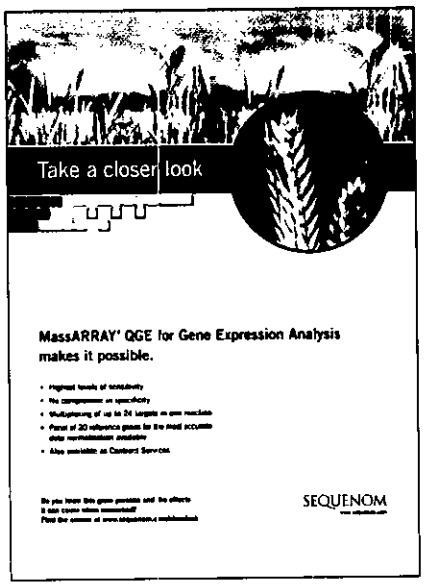
"We are using the MassARRAY Compact System in our integrated genomics research programs ... it enables us to quickly turn around studies with changing sets of samples and assays ... and to advance our work to develop mouse models of human diseases. Using iPLEX assays, we have successfully replaced sequence length polymorphism analysis with a SNP panel to accelerate our genetic mapping efforts."

TIM WILTSHIRE, PH.D.
Senior Research Investigator,
Genomics Institute of the
Novartis Research Foundation,
San Diego

MassARRAY® Technology

Meeting Customer Needs and Expanding Into New Markets

SEQUENOM's MassARRAY technology is used by leading commercial and research institutions, including cancer research centers, to perform cost effective, accurate and high throughput SNP Genotyping, Quantitative Gene Expression and Quantitative Methylation analyses. The ability to perform flexible multiplexed assay design makes MassARRAY technology the ideal technology for cost effective, routine cancer genetics, as well as other human disease, plant, and animal studies.

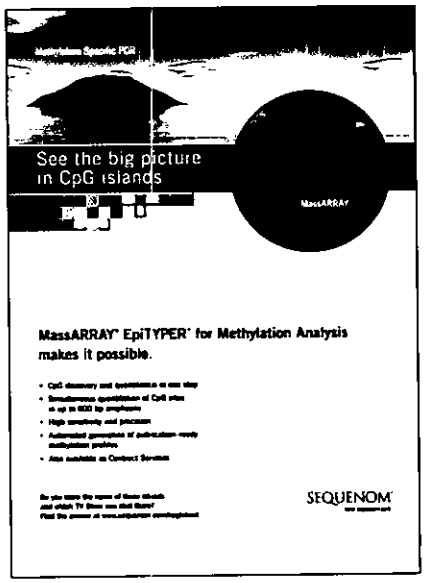


iPLEX™ GOLD – NEXT GENERATION GENOTYPING

The new iPLEX Gold assay, launched at the end of 2006, allows higher multiplexing than the original iPLEX assay, resulting in a reduced cost per genotype. We are experiencing an enthusiastic response and adoption from our customers.

GENETIC SERVICES ARE A SUCCESSFUL EXTENSION OF THE PRODUCT LINE

Our Service business, implemented late in 2005, is rapidly growing and capturing additional market share. Our service offering includes Genotyping, Gene Expression and Methylation studies.



COMPLETE SOLUTIONS

We are releasing a high performance PCR reagent kit that is optimized for MassARRAY applications, advancing our portfolio of consumables to include DNA amplification. We will also provide a menu of pre-validated assays that enables fast and easy DNA methylation profiling of known cancer genes.

STEP

This soon to be launched new software tool and database empowers convenient assay design for genetic studies including improved methylation marker discovery for cancer and epigenomic research.

NEW GENOTYPING SOFTWARE - TYPER 4.0+

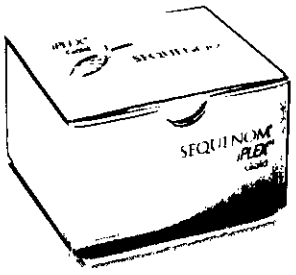
New and improved features empowering customers to perform more flexible and faster data analysis.

NEXT GENERATION GENOTYPING

Our scientists are actively working on new technology to further improve the cost of larger scale genotyping studies.

NANODISPENSER

We are launching a new, improved, and more reliable nanodispensing module in Q2 of 2007.



FUSIO™ CHIP MODULE

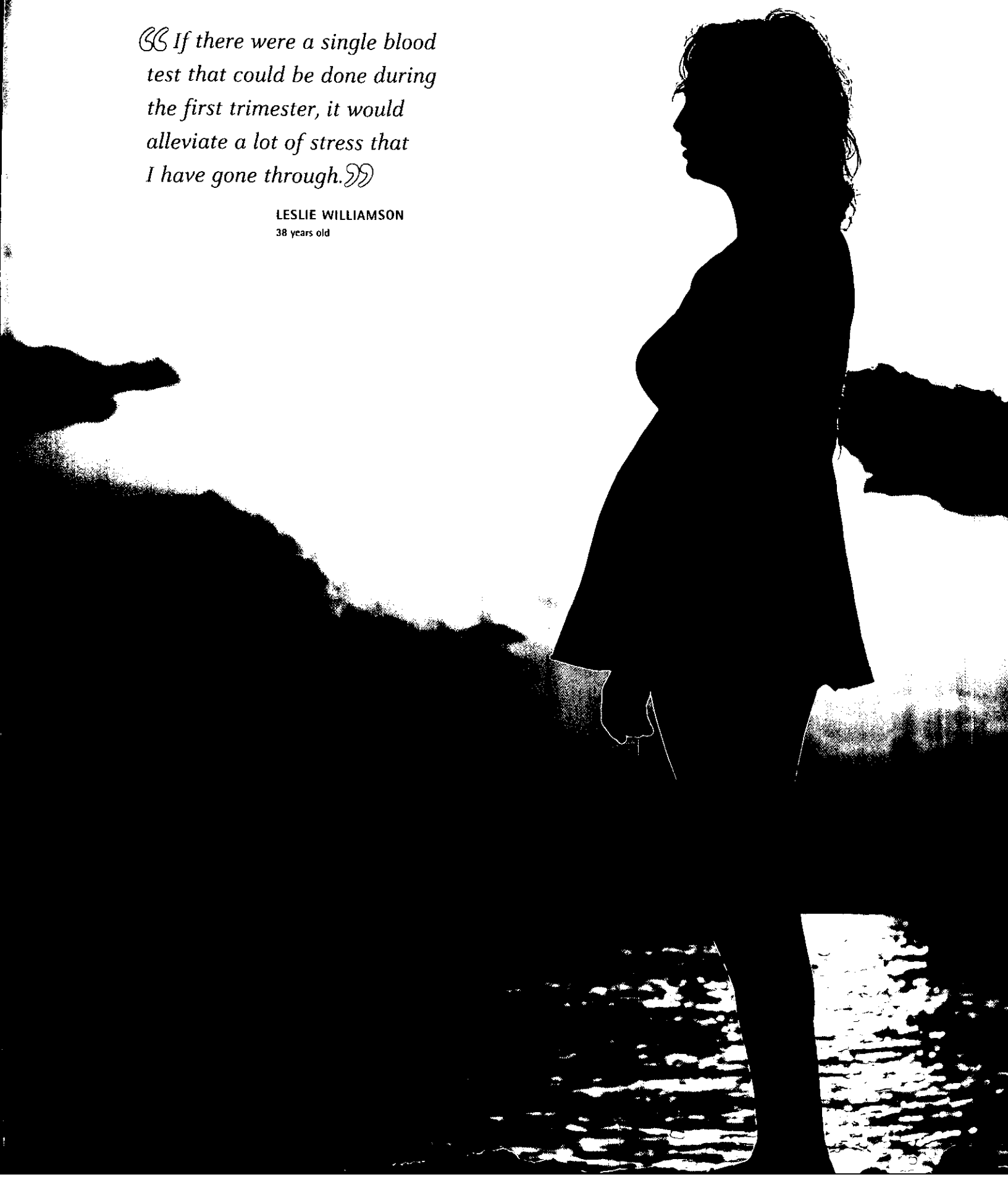
This new option for the MassARRAY liquid handler enables reaction processing and chip dispensing on one instrument with an easy to use functional exchange mechanism.

EXPANDING INTO NEW APPLICATIONS

PattRec is a new application in development for enabling comparative sequence analysis and will facilitate the rapid identification and characterization of pathogenic microbes.

"If there were a single blood test that could be done during the first trimester, it would alleviate a lot of stress that I have gone through."

LESLIE WILLIAMSON
38 years old



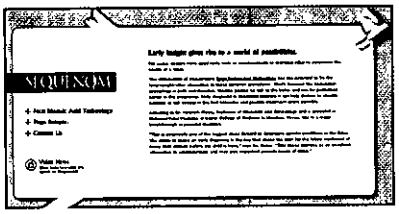
F o c u s :

Prenatal Molecular Diagnostics

EARLY INSIGHT GIVES RISE TO A WORLD OF POSSIBILITIES

Sequenom's goal is to establish itself as the leader in the emerging non-invasive prenatal diagnostics (NIPD) market. With two to three percent of the births worldwide resulting in babies with genetically determined abnormalities, there is an enormous unmet need to provide accurate non-invasive risk assessment options to patients who are faced with invasive options such as amniocentesis or chorionic villus sampling (CVS).

The introduction of Sequenom's Cell Free Fetal Nucleic Acid Technology has the potential to offer the long-sought-after alternative to these complex procedures. Sequenom's technology is patented, platform independent, and is truly non-invasive, using a simple blood sample that can be collected as early as the 1st trimester of pregnancy.



The process is simple: once the mother's blood is extracted in a routine blood draw, Cell Free Fetal Nucleic Acid Technology utilizes circulating fetal DNA in maternal blood to examine the genetic status of the fetus. This breakthrough suggests that effective screening may be accomplished in the future without the risks associated with disturbing the amniotic fluid that surrounds the baby in the uterus.

While our research efforts include developing applications for a broad array of genetic defects using Sequenom's Cell Free Fetal Nucleic Acid Technology, the first product applications will be for the analysis of Rhesus D (RHD) Genotype and XLD Gender Screening (inherited disorders linked to the X chromosome such as CAH, congenital adrenal hyperplasia, a treatable condition if properly diagnosed early in the first trimester of pregnancy). RhD disease can occur when the blood of an expectant mother is incompatible with her unborn child. RhD incompatibility affects approximately one in one thousand live born infants and can lead to jaundice, anemia, brain damage, heart failure and death.

The future is bright for Sequenom's non-invasive prenatal diagnostics business. As we achieve our technical and developmental milestones we envision offering a broad array of genetic tests for diseases such as Cystic Fibrosis, Lysosomal Storage Disorders (Tay-Sachs), Thalassemias and aneuploidies such as Down syndrome.

"This is potentially one of the biggest steps forward to determine genetic conditions in the fetus. The ability to make an early diagnosis is the key that opens the door for the future treatment of many birth defects before the child is born. This shows promise as an excellent alternative to amniocentesis and may give expectant parents peace of mind."

DR. KENNETH MOISE
Professor of Obstetrics and Gynecology and a specialist in Maternal-Fetal Medicine at Baylor College of Medicine in Houston, Texas.

NIPD MARKET POTENTIAL

Disorder	Carrier Frequency/ Incindence	Carrier Screening Potential (US +EU + ROW)	NIPD Potential	US Potential	EU Potnetial	ROW Potential	India/China
RhD*	1:10i	n/a	754,000	304,947	377,553	71,500	
Cystic Fibrosis*	1:30c	3,412,500	226,233	101,649	112,667	11,917	
Jewish Panel (Ashkenzi)	1:30c	315,000	10,500	4,200	5,250	1,050	
alpha/Beta thalassemia	1:300c	525,000	30,810	13,665	16,095	1,050	9,072,669
gender / x-linked disorders	1:900i	105,000	52,500	21,000	26,250	5,250	
Aneuploidies*	1:800i	n/a	6,825,000	2,730,000	3,380,000	715,000	9,072,669
Gender / lifestyle*	n/a	n/a	6,825,000	2,730,000	3,380,000	715,000	

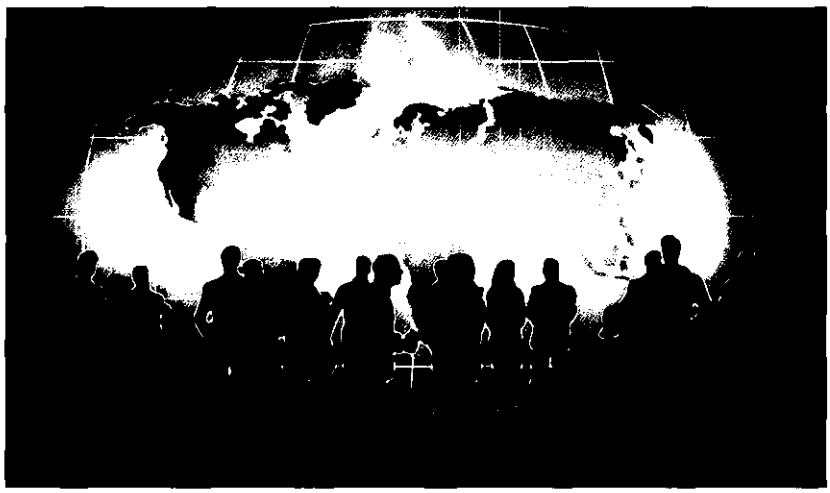
Region	Total Annual Pregnancies	*Assume 65% recieved prenatal care	CF Screening Assumptions (50%)
US	4,200,000	2,730,000	1,365,000
EU (27EU countries)	5,200,000	3,380,000	1,690,000
ROW (excl China & India)	1,100,000	715,000	357,500
Total =	10,500,000	6,825,000	3,412,5000

Region	Total Population	Rural Population	Target Audience	Birth Rate (per 1000)	Target Audience Pregnancies	Assume 65% receive prenatal care
India	1,095,351,995	742,617,747	352,734,248	22.10	7,795,427	5,067,027
China	1,328,846,388	863,750,152	465,096,236	13.25	6,162,525	4,005,641

Focus:

International Expansion

Sequenom's focus on growth also includes continued expansion into new territories around the world. In addition to offices in San Diego, CA and Newton, MA, we currently operate offices in Australia, Germany, Hong Kong, China, India, and the United Kingdom, and have 18 employees located abroad. To maximize market penetration and provide customer support for our expanding user base, we also have regional distribution partners and agents in France, Israel, Italy, Japan, New Zealand, Singapore, South Korea, Spain, Taiwan, and Turkey.



CORPORATE HEADQUARTERS
3595 John Hopkins Court
San Diego, CA 92121-1331
Phone (858) 202-9000
Fax (858) 202-9001

U.S. EAST COAST OFFICE
189 Wells Avenue
Newton, MA 02459
Phone (617) 244-8777
Fax (617) 868-4975

EUROPEAN OFFICE
Mendelssohnstrasse 15D, D-22761
Hamburg, Germany
Phone (+49) 40-899676-0
Fax (+49) 40-899676-10

ASIA PACIFIC OFFICE
300 Herston Road
Herston, Qld 4006
Australia
Phone (+61) 7 3845 3683
Fax (+61) 7 3845 3506

INDIA OFFICE
S-3 Nuchna Building
Alaknanda Shopping Complex
Alaknanda, New Delhi 110 019

HONG KONG OFFICE
1401 Hutchison House
10 Harcourt Road
Hong Kong

BEIJING, CHINA OFFICE
Unit 1028
Beiging Han Wei High-rise
No. 7 Guang Hua Road
Chaoyang District
Beijing

UNITED KINGDOM OFFICE
Trinity House
Cambridge Business Park
Cowley Road
Cambridge CB4 QWZ

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

FORM 10-K

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

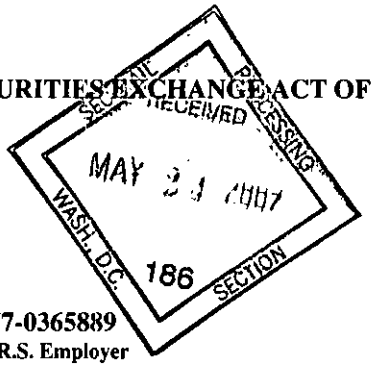
(Mark One)

☒ **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: 000-29101

SEQUENOM, INC.

(Exact name of Registrant as specified in its charter)

DELAWARE	**77-0365889**
(State or other jurisdiction or incorporation or organization)	**(I.R.S. Employer Identification No.)**
3595 John Hopkins Court San Diego, California	**92121**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (858) 202-9000

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

Common Stock, $.001 par value

(Title of class)

The Nasdaq Stock Market, LLC

(Name of Each Exchange on Which Registered)

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 ☒

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 ☒

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 ☒ No ☐

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

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 ☐ Non-accelerated filer ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

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 as reported on the Nasdaq Global Market, was approximately $27.0 million. Shares of Common Stock held by each executive officer and director and by each person who owns 10% or more of the outstanding Common Stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 28, 2007, there were 33,449,683 shares of the registrant's Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates by reference information from the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission in connection with the solicitation of proxies for the registrant's annual meeting of stockholders to be held on June 15, 2007.

SEQUENOM, Inc.
FORM 10-K
For the Fiscal Year Ended December 31, 2006
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PART I

Item 1. BUSINESS

All statements in this report that are not historical are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act. These forward-looking statements can generally be identified as such because the context of the statement will include words such as "may," "will," "intend," "plans," "believes," "anticipates," "expects," "estimates," "predicts," "potential," "continue," "opportunity," "goals," or "should," the negative of these words or words of similar import. Similarly, statements that describe our future plans, strategies, intentions, expectations, objectives, goals or prospects are also forward-looking statements. These forward-looking statements are or will be, as applicable, based largely on our expectations and projections about future events and future trends affecting our business, and so are or will be, as applicable, subject to risks and uncertainties including but not limited to the risk factors discussed in this report, that could cause actual results to differ materially from those anticipated in the forward-looking statements. We caution investors that there can be no assurance that actual results or business conditions will not differ materially from those projected or suggested in such forward-looking statements. Our views and the events, conditions and circumstances on which these future forward-looking statements are based, may change.

SEQUENOM®, SpectroCHIP®, and MassARRAY® are registered trademarks and iPLEX™ and EpiTYPER™ are trademarks of SEQUENOM, Inc. This report may also refer to trade names and trademarks of other organizations.

Sequenom was incorporated in 1994 under the laws of the State of Delaware.

Overview

We are a genetics company committed to providing genetic analysis products and services that translate genomic science into superior solutions for the biomedical research, molecular medicine, agricultural, and non-invasive prenatal testing markets. Our proprietary MassARRAY system, comprised of hardware, software applications, and consumable chips and reagents, is a high performance nucleic acid analysis platform that quantitatively and precisely measures genetic target material and variations therein. Our contract research services business provides genetic analysis services to customers as a complement and as an alternative to our systems product offerings. Our research and development efforts are committed to producing new and improved applications for our MassARRAY system that will deliver greater system versatility and also reduce the cost per data point generated. Our research and development efforts are also directed to the development of diagnostic tests, particularly non-invasive prenatal diagnostics, for use on the MassARRAY system and other platforms.

We derive revenue primarily from sales of our MassARRAY hardware, software and consumable products. Our standard MassARRAY system combines four basic components:

- proprietary analytical reaction technology and sample preparation and dispensing hardware to prepare DNA for analysis;
- a coated silicon chip known as the SpectroCHIP bioarray;
- a mass spectrometer, which uses an established analytical method that we have adapted for DNA analysis; and
- bioinformatics software that records, calculates, and reports the data generated by the mass spectrometer.

Each of these components contributes to a high level of performance in terms of speed, accuracy, and cost efficiency. We have been selling MassARRAY products since 2000.

MassARRAY technology is accepted as a leading high-performance DNA analysis system for fine mapping genotyping applications. Our customers include clinical research laboratories, biotechnology companies, universities, and government agencies. To maximize market penetration and provide customer support for our expanding user base, we have established direct sales and support personnel serving North America, Europe and Asia, in addition to regional distribution partners in India, Israel, Japan, Korea, New Zealand, Singapore, Taiwan, and Turkey.

Our 2006 highlights include:

- *Increased Revenues and Reduced Operating Cash Burn:* As a result of new product introductions and cost-cutting measures initiated in late 2005 and early 2006, our revenues in 2006 increased by $9.0 million or 47% compared to 2005, and our cash used in operations was reduced by approximately 44% down to $10.7 million in 2006.
- *Expanded MassARRAY Platform Utility with the Launch of New Products:* In March 2006, we launched our EpiTYPER assay, an enabling tool for DNA methylation marker analysis and our QGE iPLEX assay, a research tool for multiplex quantitative gene expression analysis. In October 2006, we launched our latest generation multiplex genotyping product, the iPLEX Gold assay. This assay enables a typical fine mapping genotyping study by providing routine multiplexing at 36 to 40 times per reaction for about 3 ½ cents per data point.
- *Exceeded $1 million in Revenue for Contract Research Services:* Our contract research services business exceeded $1 million in revenue for 2006, with nearly $0.5 million in revenue recognized in the fourth quarter.
- *Hired Key Executives:* In May, we hired Betty Dragon, Ph.D. as senior vice president of research and development. In August 2006, we strengthened our sales and marketing leadership with the hiring of Michael Monko, senior vice president of sales and marketing.
- *Completed $33 Million Private Placement:* In June 2006, we completed a $33 million private placement of common stock and warrants to purchase common stock with ComVest Investment Partners II LLC, Pequot Private Equity Fund IV, L.P., LB I Group, Inc. (an affiliate of Lehman Brothers) and Siemens Venture Capital GmbH.
- *Expanded Non-Invasive Prenatal Diagnostic Opportunity:* In October 2006, we secured exclusive rights in the United States, Europe, Japan, Canada, and Australia to intellectual property from Isis Innovation Ltd., the technology transfer company of the University of Oxford, for non-invasive prenatal gender determination testing for social and lifestyle purposes. In November 2006, the European Patent Office (EPO) upheld, in amended form, the validity of the European patent we licensed from Isis Innovation Ltd. for non-invasive prenatal genetic testing on fetal nucleic acids derived from maternal plasma or serum.

Biomedical Research Market

Our MassARRAY systems are used in numerous academic, pharmaceutical, and clinical research institutions in the biomedical research market to identify genetic markers with clinical utility. Our products are most cost competitive and most desirable for the fine mapping genotyping sector of the biomedical research market. Institutions conducting fine mapping genotyping studies use the MassARRAY system to perform candidate gene and candidate region association studies. These studies typically analyze up to several thousand single nucleotide polymorphisms (SNPs) with thousands of samples. Customers conduct candidate region associations to narrow down regions of interest where previous linkage studies have correlated disease phenotypes to specific regions on the chromosome. Candidate gene association studies demonstrate for specific patient samples that underlying genetic defects reside in specific biological pathways. From there, biomarker discovery efforts can potentially lead to clinical validation and use.

Candidate gene and candidate region association studies typically follow whole-genome population genetics studies, whole genome association studies, and linkage studies. Whole-genome population studies are conducted for general research purposes to create SNP maps and to determine allelic frequencies in different ethnicities and species. Whole genome association studies and linkage studies are conducted for genetic discovery purposes. In general, these studies are high throughput studies that analyze a small number of samples against a high number of SNPs. Once target regions are identified and connections to disease are made, these institutions then typically perform fine mapping genotyping studies, which are conducted in an effort to apply genetics to diseases.

Agricultural Market

Widespread livestock testing is partly being driven by government mandate, such as the various government mandated scrapie eradication programs in place around the world. These programs rely upon accurate traceability analysis for their success. The MassARRAY platform is widely recognized as one of the most accurate and cost effective platforms for providing traceability testing in this context. With growing requests for farm-of-origin verification, country-of-origin verification, age-verification, and national ID programs, this market for traceability analysis is expanding. Additionally, there is market demand for genetic testing as it relates to trait selection and feedlot management. There is also growing demand for genetic analysis of crops, including maize, rice, and others for potentially growing agricultural products with enhanced traits, such as nutritional quality, disease resistance, and crop yields.

Our MassARRAY platform is becoming more widely accepted by livestock-focused service providers in the United States and Europe for genotyping, due to its suitability for routine testing of a large number of DNA samples with modest numbers of SNPs. Beginning with our first MassARRAY system placement with the U.S. Department of Agriculture in 1999, we have provided genotyping solutions for livestock customers. We serve the livestock market through product sales, panel development and optimization, and providing services, including back-up testing, over-flow, and quality control. Our competitive advantage in the livestock market is based upon the capability of the MassARRAY system to perform high-volume routine testing. While other platform companies have been successful in the whole genome mapping segment of the market, utilizing tens of thousands of SNPs, their platforms are not as optimal for routine tests utilizing tens to hundreds of SNPs.

Products and Applications

Our MassARRAY system provides reliable results for numerous types of DNA analysis applications including SNP genotyping and allelotyping, quantitative gene expression analysis, quantitative methylation marker analysis, SNP discovery, and oligonucleotide quality control. While the MassARRAY system is versatile, it also became a more cost-effective genotyping solution for customer needs with the 2006 launch of the iPLEX Gold assay which reduced cost per genotype to about 3 ½ cent per data point for a typical study. The iPLEX Gold assay is a proprietary assay, which provides for multiplexed DNA sample analysis that in turn provides cost-effectiveness by allowing the user to perform multiple sample genotyping analyses using a similar amount of reagents and chip surface area as used for a single DNA sample analysis. Customers purchase the iPLEX Gold assay capability in the form of a software upgrade to the MassARRAY system and through the purchase of consumable chip and reagent kits.

During 2006, in addition to the iPLEX Gold assay, we launched gene expression and methylation marker analysis products and our platform offering now includes the following applications:

- *MassARRAY SNP Genotyping* analyzes genetic variations and identifies genes that may impact health and is widely used for fine mapping genotyping studies and medium to large-scale association studies. The iPLEX Gold assay allows for higher levels of multiplexing, thereby significantly reducing the cost per genotype.
- *MassARRAY QGE* accurately measures levels of gene expression to create quantitative data even when very small amounts of starting material are used. MassARRAY QGE reliably detects smaller changes in expression levels compared to competing technologies.

- *MassARRAY EpiTYPER* assay quantitatively assesses methylation ratios simultaneously across multiple CpG sites over multiple samples, dramatically increasing throughput and the scope of analysis.
- *MassARRAY SNP Discovery* is used to identify and characterize SNPs and can uncover SNPs that are not detected by standard sequence analysis.
- *Oligonucleotide Quality Control* uses our MassARRAY technology as a high-throughput quality control method for oligonucleotide production. Oligonucleotides are short strands of synthetic DNA used in various genomics research programs and error-free oligonucleotides are important in molecular biology applications.

These applications are supported by proprietary sample preparation and analysis procedures and by software components for assay design and data analysis.

Genetic Services

Through our genetic services business, we provide researchers with access to MassARRAY technology solutions for their genotyping, quantitative gene expression analysis, and quantitative DNA methylation analysis needs on a fee-for-service basis.

Non-Invasive Prenatal Diagnostics

In October 2006, we expanded our exclusive royalty-bearing license rights to the use of free fetal nucleic acids for diagnostic testing from maternal serum or plasma to include gender determination for social or lifestyle purposes through agreement with Isis Innovation Ltd. In addition to the previous exclusive license rights, which covered the general diagnostic use of fetal nucleic acids derived from maternal plasma or serum in countries, including the United States, Canada, and with some limitation in other countries in Europe and elsewhere, this expanded exclusive license for gender determination for social or lifestyle purposes includes the same countries as well as Japan and Australia. Also in January 2007, we acquired exclusive rights in territories including the United States, Europe, Australia, Canada and Japan as well as non-exclusive rights in China, to non-invasive prenatal diagnostic intellectual property from The Chinese University of Hong Kong. Our exclusively licensed patent portfolio now includes the general use, on any technology platform, of fetal nucleic acids derived from maternal plasma, serum and in some cases blood for non-invasive prenatal genetic diagnostic testing, including genetic, expression and epigenetic-based assays and tests. The licenses do not permit us to perform Rhesus D blood typing using real time polymerase chain reaction amplification platforms in Europe. Diagnostic tests based on our foundational intellectual property, which is disease independent, could be developed, provided certain technical challenges are overcome, for cystic fibrosis, Tay Sachs, hemoglobinopathies (sickle cell anemia and the thalassemias), Rhesus D, gender determination for x-linked disorders, and chromosomal aneuploidies (such as Down Syndrome), and others, on any platform including mass spectrometry and real time polymerase chain reaction amplification platforms.

Our collaboration with Qiagen, announced in January 2007, is focused on the joint development of a gold-standard preanalytical solution for small molecule (fetal) DNA enrichment for prenatal diagnostics. We have exclusive global commercialization rights to products that may be derived from this collaboration. If developed, this solution is expected to play an integral part in our further development and commercialization of diagnostic tests in the field of non-invasive prenatal diagnostics.

We are in the process of developing non-invasive prenatal nucleic acid based tests using fetal DNA applications for Rhesus D and gender determination that may provide more fundamental and reliable diagnostic information earlier in pregnancy. In January 2007, as part of our platform independent commercialization strategy, we also announced our first commercial partnership with Lenetix Medical Screening Laboratory, Inc. who will develop a CLIA validated test for Rhesus D blood incompatibility using real time polymerase chain reaction amplification.

Strategic Direction

Our strategy focuses on leveraging our technology, intellectual property, and other assets, primarily in the fine mapping segment of the genetic analysis market, and capitalizing on our potential in the prenatal and molecular diagnostics markets. In our core genetic analysis business, we are focusing on prioritizing key product and service initiatives that we believe will drive growth and create value. Our focus in non-invasive prenatal diagnostics leverages the capabilities of our technology and exclusive intellectual property in this space. In addition to the internal development of diagnostic tests for non-invasive prenatal diagnostics, we are pursuing partnering opportunities for the development and commercialization, and the adaptation of the MassARRAY system, for molecular diagnostics in general.

Sequenom's strategy includes the following:

- Focusing on meeting customer needs in the fine mapping segment of the genetic analysis market and adding additional pharmaceutical, biotechnology, agricultural, and molecular diagnostic companies to our research customer base;
- Offering products and services that provide powerful and quality solutions to our customers, including additional genotyping, QGE, and quantitative methylation analysis products and services;
- Creating a sustainable competitive advantage by launching new applications that significantly reduce cost per genotype;
- Adapting the MassARRAY platform for use in molecular diagnostics, potentially including development of in-vitro diagnostic solutions;
- Developing and commercializing, through partnerships and forward integration, non-invasive prenatal diagnostic assays; and
- Leveraging our proprietary biomarker content into partnerships and proprietary tests.

Intellectual Property

To establish and protect our proprietary technologies and products, we rely on a combination of patent, copyright, trademark and trade secret laws, as well as confidentiality provisions in our contracts.

We have implemented a diligent patent strategy, including in-licensing, designed to facilitate our research and development and commercialization of current and future products. Our patent portfolio, including in-licensed patent rights, includes 273 issued patents and 232 pending patent applications, in the United States and other major industrial nations throughout the world.

The majority of our issued United States patents pertaining to mass spectrometry-based nucleic acid analysis methods and technology will expire between 2013 and 2017. United States Patent Nos. 6,500,621, 6,300,076, 6,258,538, and 5,869,242 and European Patent No. EP 0815261 each claim nucleic acid analysis by mass spectrometry methods, including methods that may be performed using our MassARRAY system. Each of these patents expires in 2015.

Most of our genetically based disease association inventions are the subject of pending patent applications, including provisional patent applications. These patent applications are in the early stages of patent prosecution and it is difficult to predict when patents will issue, if at all.

Our prenatal diagnostic patent portfolio includes numerous in-licensed issued patents and in-licensed pending patent applications. The issued patents include United States Patent Nos. 6,250,540, 6,927,028, and 6,664,056, and foreign equivalents for portions of the portfolio that include Canada and Europe. These patents will expire between 2017 and 2022. Most of the in-licensed patent applications are in the early stages of patent prosecution and it is difficult to predict when patents will issue from those applications, if at all. These patents

and patent applications cover methods of analyzing fetal alleles in maternal serum or plasma, methods of analyzing the methylation status of fetal nucleic acid to differentiate it from maternal nucleic acid, and various DNA and RNA markers which may be useful in detecting and diagnosing various fetal disorders, such as Down Syndrome or maternal disorders, such as preeclampsia.

Our success depends to a significant degree upon our ability to continue to develop proprietary products and technologies, to identify and validate useful genetic markers and to thoroughly understand their associations with disease, and to in-license desirable or necessary intellectual property as appropriate. We intend to continue to file patent applications as we develop new products and methods for nucleic acid analysis, and as we develop diagnostic and molecular medicine related technology and products. Patents provide some degree of protection for our intellectual property. However, the assertion of patent protection involves complex legal and factual determinations and is therefore uncertain. The laws governing patentability and the scope of patent coverage continue to evolve, particularly in the areas of genetics, molecular biology, and prenatal and molecular diagnostics that are of interest to us. There can be no assurance that patents will issue from any of our patent applications. The scope of any of our issued patents may not be sufficiently broad to offer meaningful protection.

Our issued patents may be successfully challenged, invalidated, circumvented or declared unenforceable so that our patent rights would not create an effective competitive barrier. The laws of some foreign countries may not permit such assignments or may not protect our proprietary rights to the same extent, as do the laws of the United States. In view of these factors, our intellectual property positions bear some degree of uncertainty.

We also rely in part on trade secret protection and confidentiality agreements for protection of our intellectual property. We attempt to protect our trade secrets and confidential information by entering into confidentiality agreements with outside parties and with our employees and consultants. Our employees also sign agreements requiring that they assign to us their intellectual property interests in work performed for us as a part of their employment. The laws of some foreign countries may not permit such assignments or may not protect our proprietary rights to the same extent, as do the laws of the United States. All employees sign an agreement not to compete unfairly with us during their employment and upon termination of their employment, through the misuse of confidential information, soliciting employees, soliciting customers, and the like. It is possible that these agreements may be breached or invalidated and if so, there may not be an adequate corrective remedy available. Parties may breach the confidentiality provisions in our contracts or infringe or misappropriate our patents, copyrights, trademarks, trade secrets, confidential information, and other proprietary rights. Outside parties may independently discover or invent competing technologies or reverse engineer our trade secrets or other technology. The measures we are taking to protect our proprietary rights may not be adequate due to factors beyond our control.

In the future, parties may file claims asserting that our technologies or products infringe on their intellectual property. We cannot predict whether parties will assert such claims against us, or whether those claims will harm our business. If we are forced to defend against such claims, we will face costly litigation and diversion of management's attention and resources. As a result of such disputes, we may have to develop costly non-infringing technology or enter into licensing agreements. These agreements, if necessary, may be unavailable on terms acceptable to us, which could seriously harm our business and financial condition.

Competition

We face competition from various companies offering nucleic acid analysis systems and services and various companies developing and commercializing diagnostic assays, and various companies researching and developing prenatal diagnostic technology.

In the nucleic acid analysis marketplace, our MassARRAY system competes with alternative technology platforms that differ in cost per datapoint, throughput, sample amplification, analysis process, sample separation or method of DNA detection, turnaround time and quality of results. Most competitive technologies do not rely

on direct detection methods, such as mass spectrometry, but instead use indirect sample detection methods, such as hybridization and/or labeling. Such technologies are offered by: Applied Biosystems, Beckman Coulter, Inc., Illumina, Inc., Biotage AB, and others.

In the non-invasive prenatal diagnostic market, we plan to develop diagnostic research use tests based on the use of free fetal DNA in maternal serum or plasma. We believe that our exclusive license to the intellectual property surrounding the use of free fetal DNA, combined with the precision and accuracy of our MassARRAY system will provide us with a competitive advantage in this space. Our competition includes Ravgen, Inc. and also arises from alternative methods of non-invasive prenatal diagnostics such as: fetal DNA extraction from maternal urine, trophoblast purification from maternal blood, and trophoblast purification from cervical swabs. Such technologies are in development or offered by: Biocept, Inc., Xenomics, Inc., Ikonisys, Inc., and others.

Research and Development

We believe that investment in research and development is essential to establishing a long-term competitive position as a provider of genetic analysis tools and as a provider or an enabler of diagnostic tests. Our research and development expenses for the years ended December 31, 2006, 2005, and 2004, were $11.9 million, $11.9 million, and $18.6 million, respectively.

During 2006 we conducted most of our research and development activities at our facilities in the United States. Our research and development is augmented by advisory and collaborative relationships with others.

Our research and development efforts are primarily focused on expanding the applications for our MassARRAY technology, research and development of diagnostic assays, and research and development of prenatal diagnostic methods and technologies, including the sample preparation step of enriching fetal nucleic acid for subsequent analysis.

Government Regulation

Regulation by governmental authorities in the United States and other countries will be a significant factor in the production and marketing of diagnostic products, including gender tests, that may be developed by us or our corporate partners, collaborators or licensees. Certain diagnostic products developed by us or our collaborators may require regulatory approval by governmental agencies prior to commercialization. Products that we develop in the diagnostic markets, depending on their intended use, may be regulated as medical devices by the U.S. Food and Drug Administration (FDA) and comparable agencies of other countries and require either premarket approval, or PMA, or 510(k) clearance from the FDA prior to marketing. The 510(k) clearance pathway usually takes from three to twelve months from submission, but can take longer. The premarket approval pathway is much more costly, lengthy, uncertain and generally takes from six months to two years or longer from submission. The receipt and timing of regulatory approvals for the marketing of such products may have a significant effect on our future revenues. Human diagnostic products are subject to rigorous testing and other approval procedures by the FDA in the United States and similar health authorities in foreign countries. Various federal and state statutes and regulations also govern or influence the manufacturing, safety, labeling, storage, record keeping and marketing of diagnostic products.

Obtaining these approvals and the subsequent compliance with these regulations require the expenditure of substantial resources over a significant period of time, and there can be no assurance that any approvals will be granted. Any such delay in obtaining or failure to obtain such approvals could adversely affect our ability to earn sales revenues, royalties or other license-based fees. Current governmental regulations may change as a result of future legislation or administrative action and cannot be predicted.

Our research and development activities involve the controlled use of hazardous materials and chemicals. We are subject to federal, state and local laws and regulations governing the use, storage, handling and disposal of such materials and chemicals, as well as certain waste products.

Employees

As of February 28, 2007, we employed 123 persons, of whom 32 hold Ph.D. or M.D. degrees and 35 hold other advanced degrees. 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.

Executive Officers

Our executive officers, their positions with us, and their ages as of February 28, 2007 are as follows:

Name	Age	Position
Executive Officers and Directors		
Harry Stylli, Ph.D.	45	President, Chief Executive Officer and Director
Charles R. Cantor, Ph.D.	64	Chief Scientific Officer and Director
Elizabeth Dragon, Ph.D.	58	Senior Vice President, Research and Development
Michael Monko	47	Senior Vice President, Sales and Marketing
Larry Myres	48	Vice President, Operations
Clarke Neumann	43	Vice President and General Counsel
Steven Owings	54	Vice President of Commercial Development, Prenatal Diagnostics
Karsten Schmidt	45	Vice President, Business Development
John Sharp	42	Vice President, Finance and Treasurer
Dereck Tatman	34	Vice President, Business Development

Harry Stylli. Dr. Stylli joined us in June 2005 as President and Chief Executive Officer and a director. From November 2004 to February 2005, Dr. Stylli served as President and Chief Executive Officer of Xencor, Inc., a privately held, next-generation antibody platform company. From May 2002 to July 2003, Dr. Stylli served as President and Chief Executive Officer for CovX Pharmaceuticals, a biopharmaceutical company of which Dr. Stylli was a co-founder. From 1995 to 2001, Dr. Stylli served in various capacities, including Senior Vice President of Screening Technology and New Ventures, Senior Vice President of Commercial Development and most recently President, for Aurora Biosciences Corporation, a drug discovery systems company of which Dr. Stylli was a co-founder. Dr. Stylli currently serves as a director of Molecular Insight Pharmaceuticals, Inc., a publicly held biotechnology company, and is an advisor to Nanosyn, a privately held medicinal chemistry company. Dr. Stylli received his Ph.D. from London University's Faculty of Medicine and an M.B.A. from the United Kingdom's Open University.

Charles R. Cantor. Dr. Cantor joined us as Chief Scientific Officer and Chairman of the Scientific Advisory Board in August 1998. Since 1992 Dr. Cantor has served as a professor in the Department of Biomedical Engineering and Co-Director of the Center for Advanced Biotechnology at Boston University. Prior to that time, Dr. Cantor held positions at Columbia University and the University of California, Berkeley. He was also Director of the Human Genome Center of the Department of Energy at Lawrence Berkeley Laboratory. Dr. Cantor published the first textbook on genomics, *The Science and Technology of the Human Genome Project*, and remains active in the Human Genome Project through his membership in a number of the project's advisory committees and review boards. Dr. Cantor is a member of the National Academy of Sciences. He is also a scientific advisor to 12 biotech and life science companies and one venture capital firm. Dr. Cantor currently serves as a director of ExSAR, Inc., Human BioMolecular Research Institute, and Retrotrope, Inc. Dr. Cantor received his Ph.D. in Chemistry from the University of California, Berkeley.

Elizabeth Dragon, Ph.D. Dr. Dragon joined us as Senior Vice President of Research and Development in May 2006. Dr. Dragon has over 25 years of diagnostics research and development, management, and leadership experience, including significant product development and commercialization planning and execution achievements during her tenure at Roche Molecular Systems from 1990 to May 2006. At Roche, Dr. Dragon held

many leadership roles of increasing responsibility, most recently as Senior Vice President of Global Standardization and Vice President of Diagnostics Development. She pioneered the development and commercialization of PCR-based diagnostic tests and ultimately led the global commercialization of numerous FDA-approved diagnostic products. Dr. Dragon received her Ph.D. in Virology and Cell Biology from Albert Einstein College of Medicine of Yeshiva University.

Michael Monko. Mr. Monko joined us as Senior Vice President of Sales and Marketing in August 2006. Mr. Monko has 20 years of life science sales and marketing experience. He served as Vice President of Sales for Upstate/Chemicon from 2005 to July 2006 with global sales and management responsibility for more than 100 sales, service and support employees. Previously, he served 19 years at Invitrogen Corporation with a progressive and accomplished career in sales, beginning as a representative and culminating as Senior Director, Sales Force Effectiveness. Mr. Monko received his M.B.A. from University of New Hampshire.

Larry Myres. Mr. Myres joined us as Vice President of Operations in November 2005. Mr. Myres has over 20 years of experience in medical device operations. Prior to joining us, Mr. Myres was Vice President of Operations for medical device companies DexCom, Inc. from 2000 to 2005 and Precision Vascular Systems from 1997 to 2000. He spent over ten years with Alaris Medical Systems from 1986 to 1997, most recently as Director of Operations, EAME, after transferring from Advanced Cardiovascular Systems. Mr. Myres received a Bachelor of Science in Management from Westminster College of Salt Lake City.

Clarke Neumann. Mr. Neumann has served as Vice-President & General Counsel and Assistant Secretary for the Company since 2001. Mr. Neumann joined the Company in 1999 as Corporate Counsel. Prior to joining the Company, Mr. Neumann was an attorney at Lyon & Lyon, LLP, specializing in intellectual property litigation, strategic counseling, business litigation and transactional matters. Before his legal career, Mr. Neumann was employed as a sales representative for Nalco Chemical Company and as an engineer for McDonnnell Douglas Astronautics Corporation. Mr. Neumann holds a J.D. from Loyola Law School, Los Angeles, and a B.S. in Chemical Engineering from Pennsylvania State University.

Steven Owings. Mr. Owings has served as our Vice-President of Commercial Development, Prenatal Diagnostics since February 2007. From 2004 to 2006, Mr. Owings served as President, North America, of Primagen Inc., a privately held molecular diagnostics company, where he developed licensing agreements with major diagnostic and laboratory service organizations. From 2003 to 2004, Mr. Owings served as consultant and Director of BD to Epoch Biosciences, which was purchased by Nanogen Inc. in 2004. From 1999 to 2002, Mr. Owings served as Vice President, Sales and Marketing for Visible Genetics Inc., which was purchased by Bayer Diagnostics in 2002, where he lead the North and Latin American sales and marketing teams and was instrumental in the launch of the first fully integrated FDA-cleared genomic device for the assessment of HIV drug resistance. From 1997 to 1998 , Mr. Owings was with Digene Corporation, as Vice President of Sales and Marketing, where he helped launch the first FDA-approved HPV assay into the clinical diagnostics market. Prior to that, Mr Owings spent nearly 20 years in various managerial and sales positions at Roche Diagnostic Systems. From 1992 to 1997, as Director of the PCR Business Unit, U.S., he assisted in transitioning PCR technology from research laboratory use to commercial laboratories, hospitals and healthcare providers nationwide. Mr. Owings holds a Bachelor of Science from Northern Arizona University.

Karsten Schmidt. Dr. Karsten Schmidt joined us in January 1999 as Director, Business Development and was appointed Managing Director of our German subsidiary in the same year and Vice President, European Operations in 2000. Dr. Schmidt moved to the Corporate Headquarters as Vice President of Operations in 2003 with world wide responsibility for coordination of R&D Activities, Product Development, Mass Spectrometry, Manufacturing, Quality Assurance, and Regulatory Affairs. In December 2005 Dr. Schmidt was appointed Vice President of Business Development. Before joining us, he held a senior management position at Rhône-Poulenc Rorer (now Sanofi-Aventis), Germany where he was responsible for all drug regulatory affairs activities in the asthma and allergy area. Dr. Schmidt is a trained pharmacist. He received his Ph.D. in pharmaceutical biology from the University in Bonn.

John Sharp. Mr. Sharp joined us as Vice President, Finance in November 2004. In October 2005, Mr. Sharp was appointed Treasurer and designated our principal financial and accounting officer. From August 2000 to November 2004, Mr. Sharp was Director of Accounting at Diversa Corporation, a publicly traded biotech company, where he was responsible for managing the overall accounting function, including financial reporting, internal controls, and corporate governance. From January 1994 until August 2000, Mr. Sharp held various positions, most recently Senior Audit Manager, at PricewaterhouseCoopers. Mr. Sharp received a Bachelor of Science from San Diego State University and is a Certified Public Accountant.

Dereck Tatman, Ph.D. Dr. Tatman has served as Vice President of Business Development for the Company since July 2004. Dr. Tatman joined the Company in 2000 as a Business Development Analyst. Dr. Tatman has over 10 years of experience in biotechnology and start-up business development environments. Prior to joining the Company, Dr. Tatman was employed at Dow Agrosciences in the biotechnology business development group and consulted to high-tech and biotech start-ups assisting in business plan development and strategic positioning. Dr. Tatman holds a Ph.D. from Arizona State University and a Master's of Science in Management from Krannert School of Business at Purdue University.

Paul Hawran. Mr. Hawran, 54, served as a director from August 2006 until February 2007. Mr. Hawran joined Neurocrine Biosciences, Inc. as Vice President and Chief Financial Officer in 1993 and served as Executive Vice President and Chief Financial Officer since 2001 with responsibilities for strategic planning, finance, investor relations, human resources, information technologies and operations. He previously served as Vice President and Treasurer at SmithKline Beecham Corporation, as well as in various financial positions at Warner Communications, now Time Warner, Inc. Mr. Hawran is also a member of Cytori Therapeutics, Inc.'s board of directors. He received an MS in taxation from Seton Hall University and BS in finance from St. John's University. He is a member of the American Institute of Certified Public Accountants, the California and Pennsylvania Institutes of Certified Public Accountants and the Financial Executives Institute. In February 2007, Mr. Hawran was appointed Chief Financial Officer of Sequenom effective April 1, 2007, and will report to Harry Stylli, Ph.D., President and Chief Executive Officer. Until April 1, Mr. Hawran will serve as a consultant to the Company assisting in financial, corporate development and investor relations functions.

Available Information

Copies of our public filings are available on our Internet website at http://www.sequenom.com as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. We will supply a copy of this annual report on Form 10-K, and any other periodic or current reports, without charge. To request a copy, please contact Investor Relations, SEQUENOM, Inc., 3595 John Hopkins Court, San Diego, CA, 92121, USA.

Item 1A. RISK FACTORS

The following is a summary of many of the risks we face in our business. You should carefully read these risks and uncertainties in evaluating our business.

We may need additional capital to support our growth, which will result in additional dilution to our stockholders.

Our business may require additional investment that we have not yet secured. As of December 31, 2006, we have available cash, cash equivalents and short-term investments of approximately $24.9 million. We believe our cash, cash equivalents and short-term investments will be sufficient to fund our operating expenses and capital requirements through 2008. However, based upon our current plans, our business will require additional investment that we have not yet secured. The actual amount of funds that we will need will be determined by many factors, some of which are beyond our control, and we may need funds sooner than currently anticipated. These factors include but are not limited to:

- the size of our future operating losses;
- the level of our and our distributors' success in selling our MassARRAY products and services including the new iPLEX Gold product which provides greater efficiency and which could reduce overall consumables usage by customers;
- the terms and conditions of sales contracts, including extended payment terms;
- our ability to introduce and sell new products and services, including iPLEX Gold, and successfully reduce inventory levels of earlier products;
- the level of our selling, general and administrative expenses;
- the extent of our investment in diagnostic technology, including non-invasive prenatal analysis technology, development, commercialization, and regulatory approval;
- our success in and the expenses associated with researching and developing and commercializing diagnostic products, alone or in collaboration with our partners, and obtaining any required regulatory approval for those products;
- the level of our success alone or in collaboration with our partners in launching and selling any diagnostic products and services;
- the extent of our research and development pursuits, including our level of investment in MassARRAY product research and development, and diagnostic assay research and development;
- the extent to which we enter into, maintain, and derive revenues from licensing agreements, including agreements to out-license our non-invasive prenatal analysis technology, disease gene discoveries, research and other collaborations, joint ventures and other business arrangements;
- the extent to which we acquire, and our success in integrating, technologies or companies;
- the level of our legal expenses including those expenses associated with litigation and with intellectual property protection;
- the level of our expenses associated with the audit of our consolidated financial statements as well as compliance with other corporate governance and regulatory developments or initiatives; and
- regulatory changes and technological developments in our markets.

General market conditions or the market price of our common stock may not support capital raising transactions such as an additional public or private offering of our common stock or other securities. In addition, our ability to raise additional capital may be dependent upon our stock being quoted on the Nasdaq Global Market or upon obtaining shareholder approval. There can be no assurance that we will be able to satisfy the

criteria for continued listing on Nasdaq or that we will be able to obtain shareholder approval if it is necessary. If we are unable to obtain additional funds on a timely basis or on terms favorable to us, we may be required to cease or reduce further commercialization of our products, to cease or reduce certain research and development projects, to sell some or all of our technology or assets or business units or to merge all or a portion of our business with another entity. If we raise additional funds by selling shares of our capital stock, the ownership interest of our current stockholders will be diluted. Insufficient funds may require us to delay, scale back, or eliminate some or all of our activities. If the investors in our June 2006 private placement choose to act together, they may be able to control our operations and act in a manner that advances their best interests and not necessarily those of other stockholders. The investors in our June 2006 private placement beneficially own approximately 60% of our common stock based on the number of shares of our common stock outstanding on December 31, 2006. Upon the exercise in full of the warrants issued in the private placement (assuming no cashless exercise), these investors would control up to approximately 70% of the voting power of our capital stock based on the number of shares of our common stock outstanding on December 31, 2006. These stockholders, acting together, have substantial control over us. The interests of this group of stockholders may not always coincide with our interests or the interests of other stockholders, and they may act in a manner that advances their best interests and not necessarily those of other stockholders. These stockholders hold nearly all of the shares needed to approve amendments to our Bylaws and Certificate of Incorporation to remove certain supermajority voting provisions, permit stockholders holding a majority of our outstanding shares to call special meetings of stockholders, and permit stockholder actions by written consent. Pursuant to the securities purchase agreement entered into with the investors in our private placement, we are required to call a special meeting of stockholders within 60 days of the request of any two directors nominated by the investors for the purpose of seeking approval of these amendments to our Bylaws and Certificate of Incorporation or any other action that is proposed in good faith by at least three of our directors for legitimate corporate purposes. The approval of these amendments to our Bylaws and Certificate of Incorporation would provide even greater control to the investors in the private placement if they elect to act together.

If the investors in our private placement sell their shares which have been registered under the Securities Act, the market price of our common stock may decline significantly.

The shares of common stock issued to the investors in our June 2006 private placement, as well as any shares issuable upon exercise of the warrants issued to the investors, have been registered under the Securities Act of 1933, as amended, or Securities Act, and such shares are freely transferable without restriction under the Securities Act (but may be subject to the short-swing profit rules and other restrictions on affiliates under the Securities Exchange Act of 1934, as amended). If a large number of shares are sold into the public market, the market price of our common stock may decline significantly.

We have limited experience.

Many of our technologies, particularly our non-invasive prenatal and other molecular diagnostic technologies, are at an early stage of discovery and development. We continue to commercialize new products and create new applications for our products. We are developing research-use-only and diagnostic applications for our MassARRAY platform and for other platforms, including non-invasive prenatal tests, and plan to eventually commercialize ourselves, or with a partner, a research-use-only test for Rhesus D using a real-time PCR platform in addition to other tests. We have limited or no experience in these applications of our technology and operating in these markets. You should evaluate us in the context of the uncertainties and complexities affecting an early stage company developing products and applications for the life science industries and experiencing the challenges associated with entering into new markets that are highly competitive. We need to make significant investments to ensure our products perform properly and are cost-effective, and we will likely need to apply for and obtain certain regulatory approvals to sell our products for diagnostic applications and it is uncertain whether such approvals will be granted. Even if we develop products for commercial use and obtain all necessary regulatory approval, we may not be able to develop products that are accepted in the genomic, diagnostic, non-invasive prenatal, clinical research, pharmaceutical, or other markets or the emerging field of molecular medicine and that can be marketed and sold successfully.

We have a history of operating losses, anticipate future losses and may never become profitable.

We have experienced significant operating losses in each period since our inception. At December 31, 2006, our accumulated deficit was approximately $460.1 million. These losses have resulted principally from expenses incurred in research and development, from selling, general, and administrative expenses associated with our operations, our significant lease obligations, and the write-down to the carrying value of acquired goodwill and intangibles. We expect to incur operating losses in the future as a result of expenses associated with research and product development, production, marketing and selling, general and administrative expenses, and our significant lease obligations, as well as expenses associated with consolidating and completing the integration of any business or technology that we may acquire in the future. To achieve profitability, we would need to generate significant additional revenue with significant gross margins. It is uncertain when, if ever, we will become profitable, or cash-flow positive. Even if we were to become profitable, we might not be able to sustain or increase profitability on a quarterly or annual basis.

Our operating results may fluctuate significantly.

Our revenues and results of operations may fluctuate significantly, depending on a variety of factors, including the following:

- our ability to manage costs and expenses and effectively implement our business strategy;
- our or our distributors' success in selling, and changes in the demand for, our products and services including our MassARRAY Compact platform and iPLEX Gold multiplexing application and related consumables, and demand for products and services for genotyping, DNA methylation (epigenetic analysis) and QGE (gene expression analysis) applications;
- our success in depleting or reducing current product inventories in view of new or upcoming product introductions;
- the pricing of our products and services and those of our competitors;
- variations in the timing of payments from customers and collaborative partners and the recognition of these payments as revenues;
- the timing and cost of any new product or service offerings by us;
- our ability to develop new applications and products, such as non-invasive prenatal or other diagnostic assays, the success of such applications and products, and our ability to improve current products to increase demand for such products;
- the potential need to acquire licenses to new technology, including genetic markers that may be useful in diagnostic applications, or to use our technology in new markets, which could require us to pay unanticipated license fees and royalties in connection with licenses we may need to acquire;
- our research and development progress and how rapidly we are able to achieve technical milestones, including the milestone of sufficient fetal DNA enrichment with respect to our non-invasive prenatal technologies;
- our ability to promote, and license or sell, candidate disease gene markers that may lead to future diagnostic products;
- the cost, quality and availability of our consumable chips, also known as SpectroCHIP bioarrays, oligonucleotides, DNA samples, tissue samples, reagents and related components and technologies;
- material developments in our customer and supplier relationships including our ability to successfully transition in a timely manner during 2007, to a new dispensing apparatus for our MassARRAY system with a new vendor;
- our ability to clinically validate any potential non-invasive prenatal or other diagnostic related products and obtain regulatory approval of any potential products; and

- expenses related to, and the results of, any litigation or other legal proceedings.

Further, our revenues and operating results are difficult to predict because they depend on the number, timing, and type of MassARRAY system placements that we make during the year, the number, timing, and types of software licensed or sold, and the quantity and timing of consumables sales for the installed base of systems. Changes in the relative mix of our MassARRAY system and consumables sales can have a significant impact on our gross margin, as consumable sales typically have margins significantly higher than MassARRAY system sales. Our revenues and operating results are also difficult to predict because they depend upon the activities of our distributors. The absence of or delay in generating revenues could cause significant variations in our operating results from year to year and could result in increased operating losses.

We believe that period-to-period comparisons of our financial results will not necessarily be meaningful. You should not rely on these comparisons as an indication of our future performance. If our operating results in any future period fall below the expectations of securities analysts and investors, our stock price will likely fall.

We have a history of generating a large percentage of our revenue at the end of each quarterly accounting period.

Due to the manner in which many customers in our target markets allocate and spend their budgeted funds for acquisition of our products, a large percentage of our sales are booked at the end of each quarterly accounting period. Because of this timing of our sales, we may not be able to reliably predict order volumes and our quarterly revenues. A sales delay of only a few days may significantly impact our quarter-to-quarter comparisons. If our quarterly revenues fall below the expectations of securities analysts and investors, our stock price may decline. Similarly, if we are unable to ship our customer orders on time, or if extended payment terms are required, there could be a material adverse effect on revenues for a given quarter.

A reduction in revenues from sales of MassARRAY products would harm our business.

The demand for MassARRAY systems and consumables has changed over time, and any decline in demand will reduce our total revenues. We expect that sales of MassARRAY systems and consumables will account for most of our total revenues for the foreseeable future. Also, our competitors have offered low priced fee-for-service genotyping services and technologies to the DNA analysis marketplace. These factors and the following factors, among others, would reduce the demand for MassARRAY products:

- competition from other products or failure of our products or applications, particularly the iPLEX Gold application, to perform as expected;
- changes in fiscal policies and the economy which negatively impact customer buying decisions; and
- negative publicity or evaluations, particularly with respect to product warranty and repair and troubleshooting services provided to existing customers and with respect to our recently acquired license rights to perform gender testing for social or lifestyle purposes.

Our revenues are subject to the risks faced by biotechnology and diagnostic companies, pharmaceutical companies, and governmental and other research institutions.

We expect that our revenues in the foreseeable future will be derived primarily from MassARRAY system products provided to academic institutions, biotechnology, diagnostic, and pharmaceutical companies, laboratories, companies and institutions that service the livestock industry, and governmental and other research institutions. Our operating results could fluctuate substantially due to reductions and delays in research and development expenditures by these customers. These reductions and delays could result from factors such as:

- changes in economic conditions and possible country-based boycotts;
- changes in government programs that provide funding;

- changes in the regulatory environment affecting health care and health care providers, and for example, recent draft FDA guidance which, if effected, may impose additional restrictions on CLIA licensed laboratories performing research-use-only tests;
- pricing pressures and reimbursement policies;
- market-driven pressures on companies to consolidate and reduce costs;
- other factors affecting research and development spending; and
- uncertainty about our ability to fund operations and supply products to customers.

None of these factors are within our control. We have broadened the markets to which we sell our products and applications and continue to develop new applications and products for use in new markets. We are targeting customers in clinical research and clinical marker validation, the emerging field of molecular medicine, genetic service laboratories, and animal testing laboratories. We have limited or no experience operating in these potential markets and, as a result, may be unable to develop products and applications that allow us to penetrate these markets or successfully generate any revenue from sales in these markets. We will have limited ability to forecast future demand for our existing and any new products and applications in these markets.

We depend on sales of our consumable chips and other MassARRAY consumables for a significant portion of our revenues.

Sales of our consumable chips and other consumables for the MassARRAY system are an important source of revenue. It is possible that our new iPLEX Gold multiplexing application may result in lower volumes of consumable chip purchases by customers on a per system basis, which in turn could cause revenues to decline. Revenues from MassARRAY consumables totaled approximately 45% of our total revenues for the year ended December 31, 2006, compared to 57% of our total revenues for the year ended December 31, 2005. Factors which may limit the use of our consumable chips and other consumables or otherwise adversely affect our revenues from consumables include:

- the extent of our customers' level of utilization of their MassARRAY systems;
- our ability to provide timely repair services and our ability to secure replacement parts, such as lasers, for our MassARRAY systems;
- the extent to which customers increase multiplexing levels using the iPLEX Gold application;
- failure to sell additional MassARRAY systems;
- the termination of contracts with or adverse developments in our relations with suppliers of our consumables;
- the training of customer personnel;
- the acceptance of our technology by our customers; and
- the ability to maintain necessary quality standards and specifications for our SpectroCHIP products.

We may not be able to generate any revenue from non-invasive prenatal research-use only or diagnostic tests, or any other tests we may develop.

During the past year, we have committed significant research and development resources to the development of research-use only and diagnostic tests, particularly non-invasive prenatal tests, for use on our MassARRAY system and other platforms. Although we currently anticipate launching our first research use only test, a test for Rhesus D using a real-time PCR platform, in the first half of 2007, there is no guarantee that we will successfully launch this or any other tests for any use. We have no experience in manufacturing, selling, marketing or distributing diagnostic or other tests. If we, or our partners, are not able to successfully market or

sell non-invasive prenatal research-use only or diagnostic tests or other tests we may develop for any reason, including the failure to obtain any required regulatory approvals, we will not generate any revenue from the sale of such tests. Even if we are able to develop non-invasive prenatal research-use only or diagnostic or other tests for sale in the marketplace, a number of factors could impact our ability to generate any significant revenue from the sale of such tests, including the following:

- reliance on third-party CLIA-certified (Clinical Laboratory Improvement Amendments, 1988) laboratories, which are subject to routine governmental oversight and inspections for continued operation pursuant to CLIA, to process tests that we develop;
- reliance on third parties to manufacture any non-invasive prenatal research-use only or diagnostic or other tests that we may develop;
- our non-invasive prenatal Rhesus D test, if successfully launched, will be for research use only and may never be approved for commercial use;
- the availability of alternative and competing tests or products;
- compliance with federal, state and foreign regulations for the sale and marketing of research-use only or diagnostic or other tests, including non-invasive prenatal tests;
- the accuracy rates of such tests, including rates of false-negatives and/or false-positives;
- concerns regarding the safety or effectiveness of non-invasive prenatal or other tests;
- changes in the regulatory environment affecting health care and health care providers, including changes in laws regulating laboratory testing;
- the extent and success of our sales and marketing efforts;
- pricing pressures and changes in third-party payor reimbursement policies;
- general changes or developments in the market for women's health diagnostics;
- ethical and legal issues concerning the appropriate use of the information resulting from the diagnostic or other tests; and
- the refusal by women to undergo such tests for moral, religious or other reasons, or based on perceptions about the safety or reliability of such tests.

If our customers are unable to adequately prepare samples for our MassARRAY system, the overall market demand for our products may decline.

Before using the MassARRAY system, customers must prepare samples by following several steps that are subject to human error, including DNA isolation and DNA amplification. If DNA samples are not prepared appropriately, or the proposed assays are too complex, the MassARRAY system may not generate a reading or a correct reading. If our customers experience these difficulties, they might achieve lower levels of throughput than specified for the system. If our customers are unable to generate expected levels of throughput, they might not continue to purchase our consumables, they could express their discontent with our products to others, or they could collaborate with others to jointly benefit from the use of our products. Any or all of these actions would reduce the overall market demand for our products. From time to time, we have experienced customer complaints regarding data quality and difficulty in processing more complex assays.

The sales cycles for our products are lengthy, and we may expend substantial funds and management effort with no assurance of successfully selling our products or services.

The sales cycles for our MassARRAY system products are typically lengthy. Our sales and licensing efforts require the effective demonstration of the benefits, value, and differentiation and validation of our products and services, and significant training of multiple personnel and departments within a potential customer organization.

We may be required to negotiate agreements containing terms unique to each prospective customer or licensee which would lengthen the sales cycle. We may expend substantial funds and management effort with no assurance that we will sell our products or services. In addition, this lengthy sales cycle makes it more difficult for us to accurately forecast revenue in future periods and may cause revenues and operating results to vary significantly in such periods.

We may not be able to successfully adapt our products for commercial applications.

A number of potential applications of our MassARRAY technology, including research-use-only and diagnostic applications for non-invasive prenatal and other molecular testing, may require significant enhancements in our core technology or the in-licensing of intellectual property rights or technologies. If we are unable to complete the development, introduction, or scale-up of any product, or if any of our new products or applications, such as gene expression analysis, epigenetic analysis or iPLEX Gold multiplexing, do not achieve a significant level of market acceptance, our business, financial condition and results of operations could be seriously harmed. Achieving market acceptance will depend on many factors, including demonstrating to customers that our technology is cost competitive or superior to other technologies and products that are available now or that may become available in the future. We believe that our revenue growth and profitability will substantially depend on our ability to overcome significant technological challenges and successfully introduce our newly developed products, applications, and services into the marketplace.

We have limited commercial production capability and experience and may encounter production problems or delays, which could result in lower revenue.

We partially assemble the MassARRAY system and partially manufacture our consumable chips and MassARRAY kits. To date, we have only produced these products in moderate quantities. We may not be able to maintain acceptable quality standards as we continue or ramp up production. For example, we have recently experienced crystallized matrix on some of our chips, which has interfered with chip performance. To achieve anticipated customer demand levels, we will need to scale-up our production capability and maintain adequate levels of inventory while manufacturing our products at a reasonable cost. We may not be able to produce sufficient quantities to meet market demand or manufacture our product at a reasonable cost. If we cannot achieve the required level and quality of production, we may need to outsource production or rely on licensing and other arrangements with third parties. This reliance could reduce our gross margins and expose us to the risks inherent in relying on others. We might not be able to successfully outsource our production or enter into licensing or other arrangements with these third parties, which would adversely affect our business.

We depend on third-party products and services and limited sources of supply to develop and manufacture our products.

We rely on outside vendors to supply certain products and the components and materials used in our products. Some of these products, components and materials are obtained from a single supplier or a limited group of suppliers. Our MassARRAY system is comprised of several components, of which the following are currently obtained from a single supplier: Bruker Daltonics, Inc. supplies our mass spectrometers, Samsung Electronics Co., Ltd. previously supplied our nanodispensers (also known as pintools), PSI, Inc. supplies our chips and Majer Precision Engineering, Inc. supplies the pins for the pintools. We are currently in negotiations with vendors regarding manufacture of a nanodispenser product that will replace the product previously supplied by Samsung. We cannot be assured that we will successfully complete these negotiations and secure supply of a replacement nanodispenser product, and if we are unable to do so, our business could be harmed as we deplete our current inventory of Samsung supplied nanodispensers.

We also have sole suppliers for certain of our consumable products. In the event of any adverse developments with these vendors, our product supply may be interrupted which would have an adverse impact on our business. In the past, we have experienced quality problems with and delays in receiving components used to

produce our consumable chips, problems with laser reliability in our mass spectrometers supplied by Bruker and lengthy delays in obtaining lasers for replacement, problems with matrix crystallization on our chips, and also had technical difficulties with our pin-tool nanoliter dispenser device. We have also experienced software and operational difficulties with our MassARRAY Compact system. Our reliance on outside vendors generally and a sole or a limited group of suppliers in particular involves several risks, including:

- the inability to obtain an adequate supply of properly functioning, required products, components, and materials due to capacity constraints, product defects, a discontinuance of a product by a supplier, or other supply constraints;
- reduced control over quality and pricing of products, components, and materials; and
- delays and long lead times in receiving products, components, or materials from vendors.

We and our licensees and collaborators may not be successful in developing or commercializing diagnostic products, including non-invasive prenatal diagnostic products, or other products using our products, services, or discoveries.

Development of diagnostic or other products by us, our licensees, or our collaborators are subject to risks of failure inherent in the development and commercial viability of any such product, such as demand for such product. These risks further include the possibility that such product would:

- be found to be toxic, ineffective, unreliable, or otherwise inadequate or otherwise fail to receive regulatory approval;
- be difficult or impossible to manufacture on a commercial scale;
- be uneconomical to market;
- fail to be successfully commercialized if adequate reimbursement from government health administration authorities, private health insurers, and other organizations for the costs of these products is unavailable;
- be impossible to commercialize because they infringe on the proprietary rights of others or compete with products marketed by others that are superior; or
- fail to be commercialized prior to the successful marketing of similar products by competitors.

If a licensee discovers or develops diagnostic products or we or a collaborator discover or develop diagnostic or other products using our technology, products, services, or discoveries, we may rely on that licensee or collaborator (hereafter referred to as "partner") for product development, regulatory approval, manufacturing, and marketing of those products before we can realize revenue and some or all of the milestone payments, royalties, or other payments we may be entitled to under the terms of the licensing or collaboration agreement. If we are unable to successfully achieve milestones or our partners fail to develop successful products, we will not earn the revenues contemplated. Our agreements may allow our partners significant discretion in electing whether to pursue any of these activities. We cannot control the amount and timing of resources our partners may devote to our programs or potential products. As a result, we cannot be certain that our partners will choose to develop or commercialize any products or will be successful in doing so. In addition, if a partner is involved in a business combination, such as a merger or acquisition, or changes its business focus, its performance under its agreement with us may suffer and, as a result, we may not generate any revenues or only limited revenues from the royalty, milestone, and similar payment provisions contained in our agreement with that partner.

We may not successfully obtain regulatory approval of any non-invasive prenatal or other diagnostic product or other product which we or our licensing or collaborative partners develop and we may not be able to successfully partner with CLIA licensed laboratories with respect to research-use-only products.

Products that we or our collaborators develop in the molecular medicine, diagnostic, non-invasive prenatal diagnostic, or other markets, depending on their intended use, may be regulated as medical devices by the FDA and comparable agencies of other countries and require either premarket approval (PMA) or 510(k) clearance from the FDA, prior to marketing. The 510(k) clearance process usually takes from three to twelve months from submission, but can take longer. The premarket approval process is much more costly, lengthy, uncertain, and generally takes from six months to two years or longer from submission. Also, recent draft guidance from the FDA suggests changes in regulations that would be applicable to CLIA laboratories which, if such regulations become effective, could burden and delay our ability to partner or collaborate with CLIA laboratories with respect to our commercialization plans for research-use-only products. In addition, commercialization of any diagnostic or other product that our licensees or collaborators or we develop would depend upon successful completion of preclinical testing and clinical trials. Preclinical testing and clinical trials are long, expensive, and uncertain processes, and we do not know whether we, our licensees, or any of our collaborators, would be permitted or able to undertake clinical trials of any potential products. It may take us or our licensees or collaborators many years to complete any such testing, and failure could occur at any stage. Preliminary results of trials do not necessarily predict final results, and acceptable results in early trials may not be repeated in later trials. A number of companies in the pharmaceutical industry, including biotechnology companies, have suffered significant setbacks in advanced clinical trials, even after promising results in earlier trials. Delays or rejections of potential products may be encountered based on changes in regulatory policy for product approval during the period of product development and regulatory agency review. If our projects reach clinical trials, we or our licensees or collaborators could decide to discontinue development of any or all of these projects at any time for commercial, scientific, or other reasons.

If the validity of the consents from volunteers were to be challenged, we could be forced to stop using some of our resources, which would hinder our gene discovery outlicensing efforts and our diagnostic product development efforts.

We have attempted to ensure that all clinical data and genetic and other biological samples that we receive from our subsidiaries and our clinical collaborators have been collected from volunteers who have provided our collaborators or us with appropriate consents for the data and samples provided for purposes which extend to include our gene discovery outlicensing activities and diagnostic product development activities. We have attempted to ensure that data and samples that have been collected by our clinical collaborators are provided to us on an anonymous basis. We have also attempted to ensure that the volunteers from whom our data and samples are collected do not retain or have conferred on them any proprietary or commercial rights to the data or any discoveries derived from them. Our clinical collaborators are based in a number of different countries, and to a large extent we rely upon our clinical collaborators for appropriate compliance with the voluntary consents provided and with local law and regulation. That our data and samples come from and are collected by entities based in different countries results in complex legal questions regarding the adequacy of consents and the status of genetic material under a large number of different legal systems. The consents obtained in any particular country could be challenged in the future, and those consents could prove invalid, unlawful or otherwise inadequate for our purposes. Any findings against us, or our clinical collaborators, could deny us access to or force us to stop using some of our clinical or genetic resources, which would hinder our gene discovery outlicensing efforts and our diagnostic product development efforts. We could become involved in legal challenges, which could consume a substantial proportion of our management and financial resources.

If we cannot obtain licenses to patented SNPs and genes, we could be prevented from obtaining significant revenue or becoming profitable.

The U.S. Patent and Trademark Office has issued and continues to issue patents claiming SNP and gene discoveries and their related associations and functions. If certain SNPs and genes are patented, we will need to

obtain rights to those SNPs and genes to develop, use, and sell related assays and other types of products or services utilizing such SNPs and genes. Required licenses may not be available on commercially acceptable terms. If we were to fail to obtain licenses to certain patented SNPs and genes, we might never achieve significant revenue from our gene discovery outlicensing efforts or from diagnostic product development.

If the medical relevance of SNPs is not demonstrated or is not recognized by others, we may have less demand for our products and services and may have less opportunity to enter into diagnostic product development and commercialization collaborations with others.

Some of the products we hope to develop involve new and unproven approaches or involve applications in markets that we are only beginning to explore. They are based on the assumption that information about genes and SNPs may help scientists better understand conditions or complex disease processes. Scientists generally have a limited understanding of the role of genes and SNPs in diseases, and few products based on gene discoveries have been developed. We cannot be certain that genetic information will play a key role in the development of diagnostics or other products in the future, or that any genetic-based findings would be accepted by diagnostic, pharmaceutical, or biotechnology companies or by any other potential market or industry segment. If we or our customers or collaborators are unable to generate valuable information that can be used to develop diagnostics or other products, the demand for our products, applications, and services will be reduced and our business will be harmed.

We may not be able to form and maintain the collaborative relationships or the rights to third-party intellectual property and technologies that our business strategy requires and such relationships may lead to disputes over technology rights or product revenue, royalties, or other payments.

We form research collaborations and licensing arrangements with collaborators to operate our business successfully. To succeed, we will have to maintain our existing relationships and establish additional collaborations and licensing arrangements. Our current strategy includes pursuing partnering opportunities with larger companies interested in or involved in the development of pharmaceutical and diagnostic products to potentially advance our disease gene discoveries and related targets toward drug or diagnostic development. Our strategy also includes obtaining licenses to third-party intellectual property rights and technologies, such as our exclusive license to non-invasive prenatal analysis rights that we acquired from Isis Innovation Ltd, to potentially expand our product portfolio and generate additional sources of revenue. We cannot be sure that we will be able to establish any additional research collaborations, licensing arrangements, or other partnerships necessary to develop and commercialize products or that we can do so on terms favorable to us. If we are unable to establish these collaborations or licensing arrangements, we may not be able to successfully develop any diagnostic or other products or applications and generate any milestone, royalty, or other revenue from sales of these products or applications. If our collaborations or licensing arrangements are not successful or we are not able to manage multiple collaborations successfully, our programs will suffer and we may never generate any revenue from sales of products based on licensed rights or technologies or under these collaborative or licensing arrangements. If we increase the number of collaborations or licensing agreements, it will become more difficult to manage the various relationships successfully and the potential for conflicts among the collaborators and licensees or licensors will increase. Conflicts with our collaborators, licensees or licensors, or other factors may lead to disputes over technology or intellectual property rights or product revenue, royalties, or other payments, which may adversely effect our business.

In addition, our government grants provide the government certain license rights to inventions resulting from funded work. Our business could be harmed if the government exercises those rights.

Because we exclusively licensed our non-invasive prenatal diagnostic and gender determination testing rights from Isis Innovation Ltd. any dispute with Isis may adversely affect our ability to develop and commercialize diagnostic tests based on these licensed rights.

In October 2005, we entered into an exclusive license to non-invasive prenatal diagnostic rights with Isis Innovation Ltd., which we amended in October 2006 to also include exclusive rights to intellectual property for non-invasive prenatal gender determination testing for social and lifestyle purposes. We intend to use the rights that we acquired under the license to develop non-invasive prenatal nucleic acid based tests, including gender determination tests. If there is any dispute between us and Isis regarding our rights under the license agreement, our ability to develop and commercialize these diagnostic tests may be adversely affected and could delay or completely terminate our product development efforts for these diagnostic tests.

If we do not succeed in obtaining development and marketing rights for products developed in collaboration with others, our revenue and profitability could be reduced.

Our business strategy includes, in part, the development of non-invasive prenatal diagnostic and other products in collaboration with others, or utilizing the technology of others, and we intend to obtain commercialization or royalty rights to those products or technologies. If we are unable to obtain such rights, or are unable to do so on favorable financial terms, our revenue and profitability could be reduced. To date, we have initiated limited activities towards commercializing products developed in collaboration with, or utilizing the technology of, others. Even if we obtain commercialization rights, commercialization of products may require resources that we do not currently possess and may not be able to develop or obtain, or commercialization may be financially unattractive based upon the revenue-sharing terms offered by potential licensors or provided for in the relevant agreement.

Ethical, privacy, or other concerns about the use of genetic information could reduce demand for our products and services.

Genetic testing, including gender determination testing, has raised ethical issues regarding privacy and the appropriate uses of the resulting information. For these reasons, governmental authorities may limit or otherwise regulate the use of genetic testing or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Such concerns may lead individuals to refuse to use genetics tests even if permitted. Any of these scenarios could reduce the potential markets for our products and services, which would seriously harm our business, financial condition, and results of operations.

If we breach any of the terms of our license or supply agreements, or these agreements are otherwise terminated or modified, the termination or modification of such agreements could result in our loss of access to critical components and could delay or suspend our commercialization efforts.

We have sourced or licensed components of our technology from other parties. For example, Bruker Daltonics supplies our mass spectrometers, PSI, Inc. supplies our chips and Majer Precision Engineering supplies the pins for our present nanodispenser (pintool) product. We are in the process of securing a new vendor to supply us with our newly designed replacement nanodispenser product. Our failure to maintain continued supply of such components, particularly in the case of sole suppliers, or the right to use these components would seriously harm our business, financial condition, and results of operations. In November 2006, we entered into a new supply agreement with Bruker to purchase a minimum number of mass spectrometers. We have minimum purchase obligations under our supply agreement with Bruker. As a result, in the event that demand for our products declines or does not meet our forecasts, we could have excess inventory or increased expenses or our margins could decrease which could have an adverse impact on our financial condition and business. In the event of any adverse developments with these vendors, our product supply may be interrupted which would have an adverse impact on our business. Changes to or termination of our agreements or inability to renew our agreements with these parties or enter into new agreements with other suppliers could result in the loss of access to these aspects of our technology or other intellectual property rights or technologies that we may acquire from

time to time and could impair, delay, or suspend our commercialization efforts. While we negotiate for agreement periods or notice of termination periods that provide us reasonable periods of time to secure alternative supplies, and require that such agreements may not be terminated without advance notice arbitrarily or without good reason, such as uncured breach or insolvency, such provisions may not provide us with adequate time to secure alternative supplies, provide us with access to alternative technologies on commercially acceptable terms, or otherwise provide us with adequate protection.

We may not successfully integrate acquired businesses.

We may acquire additional businesses or technologies, or enter into other strategic transactions. Managing acquisitions entails numerous operational and financial risks, including:

- the inability to retain key employees of any acquired businesses or hire enough qualified personnel to staff any new or expanded operations;
- the impairment of relationships with key customers of acquired businesses due to changes in management and ownership of the acquired businesses;
- the inability to sublease on financially acceptable terms excess leased space or terminate lease obligations of acquired businesses that are not necessary or useful for the operation of our business;
- the exposure to federal, state, local and foreign tax liabilities in connection with any acquisition or the integration of any acquired businesses;
- the exposure to unknown liabilities;
- higher than expected acquisition and integration expenses that would cause our quarterly and annual operating results to fluctuate;
- increased amortization expenses if an acquisition results in significant intangible assets;
- combining the operations and personnel of acquired businesses with our own, which would be difficult and costly;
- disputes over rights to acquired technologies or with licensors or licensees of those technologies; and
- integrating or completing the development and application of any acquired technologies, which would disrupt our business and divert management's time and attention.

We may not be able to successfully compete in the biotechnology industry.

The biotechnology industry is highly competitive. We expect to compete with a broad range of companies in the United States and other countries that are engaged in the development and production of products, applications, services, and strategies to analyze genetic information and strategies to develop and commercialize diagnostic, non-invasive prenatal diagnostic, and other products for customers in the clinical research and clinical marker validation and molecular medicine fields as well as diagnostic service laboratories, animal testing & food safety labs, and customers in other markets. They include:

- biotechnology, pharmaceutical, diagnostic, chemical, and other companies;
- academic and scientific institutions;
- governmental agencies; and
- public and private research organizations.

Many of our competitors have much greater financial, technical, research, marketing, sales, distribution, service, and other resources than we do. Our competitors may offer broader product lines and services and have greater name recognition than we do. Several companies are currently making or developing products that

compete with our products. Our competitors may develop or market technologies or products that are more effective or commercially attractive than our current or future products, or that may render our technologies or products obsolete.

We may potentially compete with our customers, which may adversely affect our business.

We have sold MassARRAY systems worldwide to pharmaceutical and biotechnology companies, academic research centers, and government laboratories. Some of our customers use our DNA analysis products to perform contract research services, or to perform genetics studies on their own disease populations for potential diagnostic and drug target identification in the same or similar manner as we have done. Although there are many potential contract research services opportunities and disease areas and diagnostic applications, our customers may seek service work or develop diagnostic assays or may target diseases areas that may overlap with those that we have chosen to pursue. In such cases we may potentially compete against our customers. Competition from our customers may adversely affect our services business or our ability to successfully commercialize diagnostic products.

Our ability to compete in the market may decline if we lose some of our intellectual property rights.

Our success will depend on our ability to obtain and protect patents on our technology, to protect our trade secrets, and to maintain our rights to licensed intellectual property or technologies. Our patent applications or those of our licensors may not result in the issue of patents in the United States or other countries. Our patents or those of our licensors may not afford meaningful protection for our technology and products. Others may challenge our patents or those of our licensors, and as a result, our patents or those of our licensors could be narrowed or invalidated or become unenforceable. Competitors may develop products similar to ours that do not conflict with our patents or patent rights. Others may develop non-invasive prenatal tests or other products or methods in violation of our patents or those of our licensors, or by operating around our patents or license agreements, which could reduce sales of our consumables or reduce or remove our non-invasive prenatal and other diagnostic commercialization opportunities. To protect or enforce our patent rights, we may initiate interference proceedings, oppositions, or litigation against others. For example, in December 2001, we filed a complaint for declaratory judgment of patent non-infringement and invalidity against Myriad Genetics, Inc., in response to letters received from Myriad and its attorneys in which Myriad asserted its belief that we were engaging in activities that infringed Myriad's purported patent rights under a specific U.S. patent. In March 2002, we entered into a settlement agreement under which we acquired ownership of such patent rights and all parties agreed to dismiss the lawsuit with prejudice, and such dismissal was subsequently ordered by the court. As a result of the settlement, our products and services were not affected. However, these activities are expensive, take significant time and divert management's attention from other business concerns. The patent position of biotechnology companies generally is highly uncertain and involves complex legal and factual questions that are often the subject of litigation. No consistent policy has emerged from the U.S. Patent and Trademark Office or the courts regarding the breadth of claims allowed or the degree of protection afforded under biotechnology patents. There is a substantial backlog of biotechnology patent applications at the U.S. Patent and Trademark Office, and the approval or rejection of patent applications may take several years.

Our success will depend partly on our ability to operate without infringing on or misappropriating the proprietary rights of others.

We may be accused of infringing on the patent rights or misappropriating the proprietary rights of others. From time to time, we receive letters from companies regarding their issued patents and patent applications alleging or suggesting possible infringement. Generally these letters are offers to license and fail to provide adequate evidence or state the basis for a reasonable claim that we are engaging in any infringing activity. Intellectual property litigation is costly, and, even if we prevail, the cost of such litigation would adversely affect our business, financial condition, and results of operations. Litigation is also time consuming and would divert management's attention and resources away from our operations and other activities. If we were not to prevail in

any litigation, in addition to any damages we would have to pay, we could be required to stop the infringing activity or obtain a license. Any required license might not be available to us on acceptable terms. Some licenses might be non-exclusive, and our competitors could have access to the same technology licensed to us. If we were to fail to obtain a required license or were unable to design around a patent, we would be unable to sell or continue to develop some of our products, which would have a material adverse affect on our business, financial condition, and results of operations.

The rights we rely upon to protect the intellectual property underlying our products may not be adequate, which could enable others to use our technology and reduce our ability to compete with them.

We require our employees, consultants, advisors, and collaborators to execute confidentiality agreements and in certain cases, assignment or license agreements. We cannot guarantee that these agreements will provide us with adequate intellectual property ownership or protection against improper or unauthorized use or disclosure of confidential information or inventions. In some situations, these agreements may conflict with or be subject to the rights of others with whom our employees, consultants, advisors, or collaborators have prior employment or consulting relationships. In some situations, as is the case with our employees in Germany, these agreements or relationships may conflict with or be subject to foreign law which may provide us with less favorable rights or treatment than under U.S. law. Others may gain access to our inventions, trade secrets or independently develop substantially equivalent proprietary materials, products, information, and techniques.

If we cannot attract and retain highly-skilled personnel, our growth might not proceed as rapidly as we intend.

The success of our business will depend on our ability to identify, attract, hire, train, retain, maintain, and motivate highly skilled personnel, particularly sales, scientific, medical, and technical personnel, for our future success. Competition for highly skilled personnel is intense, and we might not succeed in attracting and retaining these employees. If we cannot attract and retain the personnel we require, we would not be able to expand our business as rapidly as we intend. In particular, if we lose any key member of our management team, we may not be able to find suitable replacements and our business may be harmed as a result. During the past several years, we have had significant turnover in our management team and have engaged in substantial headcount reductions. If our management team is not able to effectively manage us through these restructuring changes and transitions, our business, financial condition, and results of operations may be adversely affected. We do not carry "key person" insurance covering any of our officers or other employees.

If we do not effectively manage our business as it evolves, it could affect our ability to pursue opportunities and expand our business.

Evolution in our business has placed and may continue to place a significant strain on our personnel, facilities, management systems, and resources. We will need to continue to improve our operational and financial systems and managerial controls and procedures and train and manage our workforce. We will have to maintain close coordination among our various departments. If we fail to effectively manage the evolution of our business and the significant restructuring changes that we have experienced, our ability to pursue business opportunities, expand our business, and sell our products and applications in new markets may be adversely affected.

We are subject to risks associated with our foreign operations.

We expect that a significant portion of our sales will continue to be made outside the United States. Approximately 44% and 47% of our sales were made outside of the United States during the years ended December 31, 2006 and 2005, respectively. A successful international effort will require us to develop relationships with international customers and collaborators, including distributors. We may not be able to identify, attract, retain, or maintain suitable international customers or collaborators. Expansion into international markets will require us to establish and grow foreign operations, hire additional personnel to run these

operations, and maintain good relations with our foreign customers and collaborators or distributors. International operations also involve a number of risks not typically present in domestic operations, including:

- currency fluctuation risks;
- changes in regulatory requirements;
- costs and risks of deploying systems in foreign countries;
- licenses, tariffs, and other trade barriers;
- political and economic instability and possible country-based boycotts;
- difficulties in staffing and managing foreign operations;
- potentially adverse tax consequences;
- the burden of complying with a wide variety of complex foreign laws and treaties; and
- different rules, regulations, and policies governing intellectual property protection and enforcement.

Our international operations are also 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.

If our production and laboratory facilities are damaged, our business would be seriously harmed.

Our only production facility is located in San Diego, California, where we also have laboratories. Damage to our facilities due to war, fire, natural disaster, power loss, communications failure, terrorism, unauthorized entry, or other events could prevent us from conducting our business for an indefinite period, could result in a loss of important data or cause us to cease development and production of our products. We cannot be certain that our limited insurance to protect against business interruption would be adequate or would continue to be available to us on commercially reasonable terms, or at all.

Responding to claims relating to improper handling, storage or disposal of hazardous chemicals, and radioactive and biological materials which we use could be time consuming and costly.

We use controlled hazardous and radioactive materials in the conduct of our business, as well as biological materials that have the potential to transmit disease. The risk of accidental contamination or injury from these materials cannot be completely eliminated. If an accident with these substances occurs, we could be liable for any damages that result, which could seriously harm our business. Additionally, an accident could damage our research and manufacturing facilities and operations, resulting in delays and increased costs. Such damage and any expense resulting from delays, disruptions, or any claims may not be covered by our insurance policies.

We may not have adequate insurance if we become subject to product liability or other claims.

Our business exposes us to potential product liability and other types of claims and our exposure will increase as we and our partners and collaborators prepare to commercialize research-use-only or other types of non-invasive prenatal tests. We have product and general liability insurance that covers us against specific product liability and other claims up to an annual aggregate limit of $5 million. Any claim in excess of our insurance coverage would have to be paid out of our cash reserves, which would have a detrimental effect on our financial condition. It is difficult to determine whether we have obtained sufficient insurance to cover potential claims. Also, we cannot assure you that we can or will maintain our insurance policies on commercially acceptable terms, or at all.

Our stock price has been and may continue to be volatile, and your investment could suffer a decline in value.

The trading price of our common stock has been volatile and could be subject to wide fluctuations in price in response to various factors, many of which are beyond our control, including but not limited to:

- actual or anticipated variations in quarterly and annual operating results;
- announcements of technological innovations by us or our competitors;
- our success in entering into, and the success in performing under, licensing and product development and commercialization agreements with others;
- securities analysts' earnings projections or securities analysts' recommendations;
- general market conditions out of our control.

The stock market in general, and The Nasdaq Global Market and the market for life sciences companies in particular, have experienced extreme price and volume fluctuations that may have been unrelated or disproportionate to the operating performance of the listed companies. There have been dramatic fluctuations in the market prices of securities of biotechnology companies. These price fluctuations may be rapid and severe and may leave investors little time to react. Broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. Sharp drops in the market price of our common stock expose us to securities class-action litigation. Such litigation could result in substantial expenses and a diversion of management's attention and resources, which would seriously harm our business, financial condition, and results of operations. For example, in November 2001, we and certain of our current and former officers and directors were named as defendants in a class action shareholder complaint filed by Collegeware USA, which alleged that the underwriters in our initial public offering, certain of our officers and directors and we violated the federal securities laws because our registration statement and prospectus contained untrue statements of material fact or omitted material facts regarding the compensation to be received by and the stock allocation practices of the underwriters. Similar complaints were filed against hundreds of other public companies that conducted initial public offerings of their common stock in the late 1990s and 2000. Additional information regarding this complaint and the settlement pending before the court is included under Item 3 of this report.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

We are headquartered in San Diego, California, with wholly owned subsidiaries located in Hamburg, Germany, and Cambridge, England. We also have offices in Queensland, Australia, Beijing, China and Newton, Massachusetts. Collectively, we lease approximately 121,000 square feet under leases that expire at various dates through September 2015, each of which contains laboratory, office, manufacturing, or storage facilities.

The San Diego site is our company headquarters and houses our selling, general, and administrative offices, research and development facilities and manufacturing operations. The sites in Hamburg and Newton are used to support sales and distribution in Europe and the United States, respectively. The Newton site was acquired through our merger with Gemini Genomics in 2001 and is partially subleased. The site in Cambridge, England is used as our headquarters for sales and support activities performed in Europe. Our facilities are adequate for our current needs and we have been and continue to explore sublease opportunities for surplus space at our San Diego facility.

Item 3. LEGAL PROCEEDINGS

In November 2001, we and certain of our current or former officers and directors were named as defendants in a class action shareholder complaint filed by Collegeware USA in the U.S. District Court for the Southern District of New York (now captioned In re Sequenom, Inc. IPO Securities Litigation) Case No. 01-CV-10831. Similar complaints were filed in the same District Court against hundreds of other public companies that conducted initial public offerings of their common stock in the late 1990s and 2000. In the complaint, the plaintiffs allege that our underwriters, certain of our officers and directors and we violated the federal securities laws because our registration statement and prospectus contained untrue statements of material fact or omitted material facts regarding the compensation to be received by and the stock allocation practices of the underwriters. The plaintiffs seek unspecified monetary damages and other relief. In October 2002, our officers and directors were dismissed without prejudice pursuant to a stipulated dismissal and tolling agreement with the plaintiffs. In February 2003, the District Court dismissed the claim against us brought under Section 10(b) of the Securities Exchange Act of 1934, without giving the plaintiffs leave to amend the complaint with respect to that claim. The District Court declined to dismiss the claim against us brought under Section 11 of the Securities Act of 1933.

In June 2003, pursuant to the authorization of a special litigation committee of our Board of Directors, we approved in principle a settlement offer by the plaintiffs. In June 2004, we entered into a settlement agreement with the plaintiffs. In February 2005, the District Court issued a decision certifying a class action for settlement purposes and granting preliminary approval of the settlement subject to modification of certain bar orders contemplated by the settlement. In August 2005, the District Court reaffirmed class certification and preliminary approval of the modified settlement. In February 2006, the District Court dismissed litigation filed against certain underwriters in connection with the claims to be assigned to the plaintiffs under the settlement. In April 2006, the District Court held a final fairness hearing to determine whether to grant final approval of the settlement. In December 2006, the U.S. Court of Appeals for the Second Circuit vacated the District Court's decision certifying as class actions the six lawsuits designated as "focus cases." The Circuit Court has ordered a stay of all proceedings in all of the lawsuits pending the outcome of plaintiffs' petition to the Second Circuit for rehearing *en banc*. Accordingly, the District Court's decision on final approval of the settlement remains pending. We do not anticipate that the ultimate outcome of this event will have a material adverse impact on our financial position.

In addition, from time to time, we may be involved in litigation relating to claims arising out of our operations in the normal course of business.

Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matter was submitted to a vote of security holders during the fourth quarter of 2006.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

(a) Our common stock is traded on the Nasdaq Global Market under the symbol "SQNM". The following tables set forth the high and low sale prices for the Company's common stock as reported on the Nasdaq Global Market for the periods indicated.

	High	Low
Year Ended December 31, 2006:		
Fourth Quarter	$6.24	$2.12
Third Quarter	2.45	1.39
Second Quarter	2.50	1.33
First Quarter	2.64	1.80
Year Ended December 31, 2005:		
Fourth Quarter	$2.85	$1.80
Third Quarter	3.57	2.01
Second Quarter	3.69	2.52
First Quarter	5.46	3.12

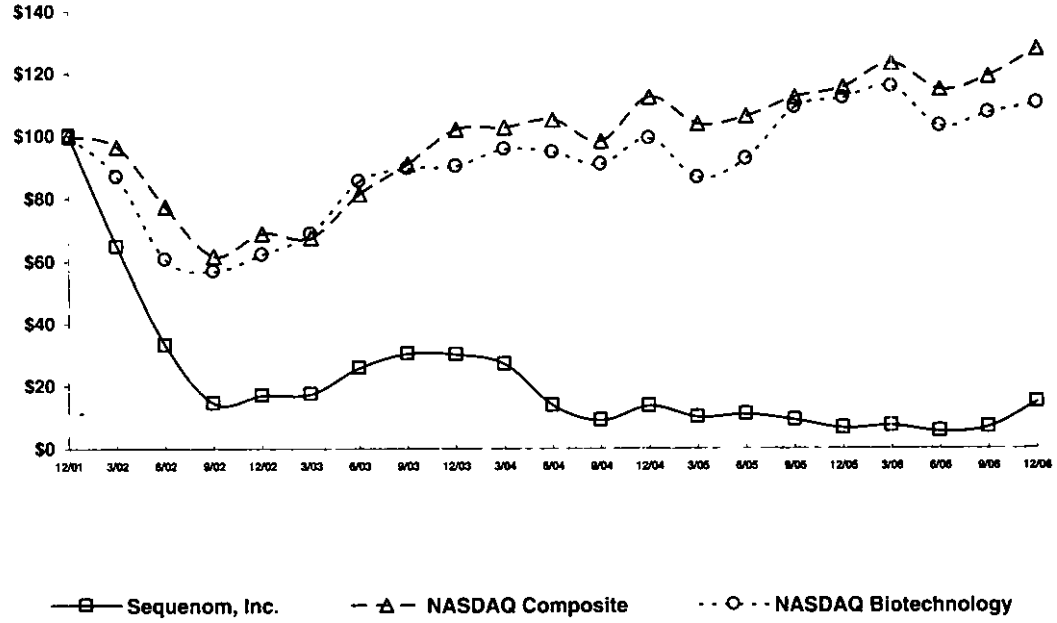
There were approximately 142 holders of record of our common stock as of February 28, 2007. We have not paid any cash dividends to date and do not anticipate any being paid in the foreseeable future.

Performance Measurement Comparison*

The following graph compares the cumulative total stockholder return on our common stock between December 31, 2001 and December 31, 2006 with the cumulative total return of (i) the NASDAQ Composite Index ("NASDAQ Index") and (ii) the NASDAQ Biotechnology Index (the "NASDAQ Biotech Index"), over the same period. This graph assumes the investment of $100.00 on December 31, 2001 in common stock, the NASDAQ Index and the NASDAQ Biotech Index, and assumes the reinvestment of any dividends.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN**

Among Sequenom, Inc., The NASDAQ Composite Index
And The NASDAQ Biotechnology Index



** $100 invested on 12/31/01 in stock or index-including reinvestment of dividends.
Fiscal year ending December 31.

* This Section is not "soliciting material" is not deemed "filed" with the SEC and is not to be incorporated by reference in any of our filing under the Securities Act of 1933 or the Securities Exchange Act of 1934 whether made before or after the date hereof without regard to any general incorporation language in any such filing.

Item 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data is derived from our audited consolidated financial statements and should be read in conjunction with the consolidated financial statements and the notes to such statements and "Management's discussion and analysis of financial condition and results of operations" included elsewhere in this report. Historical results are not necessarily indicative of the results to be expected in the future.

	Years ended December 31,				
	2006	2005	2004	2003	2002
	(In thousands, except per share data)				
Consolidated statements of operations data					
Revenues:					
Product	$ 27,051	$ 19,070	$ 21,026	$ 28,334	$ 24,868
Services	1,023	—	199	1,596	5,646
Research and other	422	351	1,224	322	371
Total revenues	28,496	19,421	22,449	30,252	30,885
Costs and expenses:					
Cost of product and service revenue	11,887	10,370	11,361	17,089	17,474
Research and development	11,939	11,930	18,627	23,254	30,748
Selling, general and administrative	22,425	22,382	23,328	25,483	31,585
Restructuring and long-lived asset impairment charge	10	593	2,207	—	—
Impairment of assets and goodwill	—	—	—	—	33,126
In process research and development	—	—	—	—	3,668
Integration costs	—	—	—	—	3,000
Amortization of acquired intangibles	1,511	2,014	3,075	3,434	3,734
Total costs and expenses	47,772	47,289	58,598	69,260	123,335
Loss from operations	(19,276)	(27,868)	(36,149)	(39,008)	(92,450)
Other income (expense):					
Interest income	906	633	773	1,631	3,865
Interest expense	(20)	(325)	(434)	(680)	(408)
Impairment of equity investment	—	—	—	—	(1,000)
Other income (expense), net	191	94	33	139	(63)
Loss before income taxes and cumulative effect of accounting change	(18,199)	(27,466)	(35,777)	(37,918)	(90,056)
Deferred income tax benefit	622	929	1,152	1,237	1,309
Net loss before cumulative effect of accounting change	(17,577)	(26,537)	(34,625)	(36,681)	(88,747)
Cumulative effect of accounting change	—	—	—	—	(116,947)
Net loss	$(17,577)	$(26,537)	$(34,625)	$(36,681)	$(205,694)
Net loss per share, basic and diluted:					
Before cumulative effect of accounting change	$ (0.71)	$ (0.67)	$ (2.62)	$ (2.79)	$ (6.96)
Cumulative effect of accounting change	—	—	—	—	(9.21)
Net loss per share, basic and diluted	$ (0.71)	$ (2.00)	$ (2.62)	$ (2.79)	$ (16.17)
Shares used in computing net loss per share, basic and diluted	24,842	13,276	13,219	13,162	12,717

	As of December 31,				
	2006	2005	2004	2003	2002
	(In thousands)				
Consolidated balance sheet data					
Cash, cash equivalents, short-term investments and restricted cash	$26,330	$ 8,678	$37,944	$ 67,454	$102,550
Working capital	23,651	5,403	28,479	56,344	85,370
Total assets	39,881	24,436	58,486	104,936	152,608
Total long-term obligations	3,525	1,363	5,700	6,569	9,742
Total stockholders' equity	25,450	11,743	38,072	72,015	108,249

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

We are a genetics company committed to providing genetic analysis products and services that translate genomic science into superior solutions for biomedical research, agricultural, molecular medicine applications and diagnostic applications including non-invasive prenatal diagnostics. Our proprietary MassARRAY system, comprised of hardware, software applications, consumable chips and reagents, is a high performance nucleic acid analysis platform that quantitatively and precisely measures genetic target material and variations therein. In late 2005, we launched our services business, which provides genetic analysis services to customers as a complement and as an alternative to our systems product offerings. Our research and development efforts are committed to producing new and improved applications for our MassARRAY system that will deliver greater system versatility and also reduce the cost per data point generated. Our research and development efforts are also directed to the development of diagnostic tests, particularly non-invasive prenatal diagnostics, for use on the MassARRAY system and potentially other platforms.

We derive revenue primarily from sales of our MassARRAY hardware, software and consumable products. Our standard MassARRAY system combines four basic components:

- proprietary analytical reaction technology and sample preparation and dispensing hardware to prepare DNA for analysis;
- a coated silicon chip known as the SpectroCHIP bioarray;
- a mass spectrometer, which uses an established analytical method that we have adapted for DNA analysis; and
- bioinformatics software that records, calculates, and reports the data generated by the mass spectrometer.

Each of these components contributes to a high level of performance in terms of speed, accuracy, and cost efficiency. We have been selling MassARRAY products since 2000.

Our MassARRAY technology is accepted as a leading high-performance DNA analysis system for the fine mapping genotyping market. Our list of customers includes clinical research laboratories, biotechnology companies, and government agencies. To maximize market penetration and provide customer support for our expanding user base, we have established direct sales and support personnel serving North America, Europe and Asia, in addition to regional distribution partners in France, India, Israel, Japan, Korea, New Zealand, Singapore, Taiwan, and Turkey.

Genetic analysis is primarily conducted in two key biomedical research market sectors: the academic research market, where we currently focus, and the clinical analysis market, where we are expanding. The research market is a relatively small market and is mainly comprised of academic institutions, which make initial

genetic discoveries. However, it is the source of discoveries of new genetic content. The clinical analysis market is significantly larger and takes the genetic analysis a step further to establish the use of genes and genetic markers for the potential benefit of the general population.

The needs of these markets differ significantly. The academic research market, which requires the highest data density per sample, is more tolerant to inconsistencies in data and error rates, and typically has a shorter window of opportunity. Sample throughput is very high. The academic research market is extremely price competitive. The clinical analysis market is typically interested in a defined number of markers per sample, is not as tolerant to inconsistencies and error rates, typically has a longer development cycle, and is less price competitive. Sample throughput requirements are not nearly as high. Considering the clinical analysis market's requirements and the strengths of the MassARRAY system, including its high sensitivity, specificity, and reproducibility, we believe there is significant opportunity to be more competitive in the clinical analysis market.

We have targeted customers conducting quality genotyping and performing fine mapping studies, candidate gene studies, comparative sequencing, gene expression analysis, and epigenetic analysis—the analysis of DNA methylation, in the molecular medicine market.

We also plan to broaden the markets to which we sell our product line. We have identified four target segments for potential growth: clinical research and clinical marker validation, the emerging field of molecular medicine, diagnostic service laboratories, and animal testing laboratories.

As of December 31, 2006, our revenues consisted of sales of MassARRAY hardware, software, consumables, maintenance agreements, and from services contracts through our genetic analysis services business. The impact of our MassARRAY Compact system, our iPLEX and iPLEX Gold assays, other new products and product applications and our services business on future revenues, margins, expenses, and cash flows remains uncertain and depends on many factors as described in Item 1A of this report under the caption "Risk Factors".

We expect revenues from out-licensing and commercialization of our non-invasive prenatal diagnostics technology, including technology for Rhesus D incompatibility using a real-time polymerase chain reaction platform, to be minimal for the foreseeable future. We also expect revenues from our out-licensing and commercialization efforts with respect to our prior disease gene discoveries to be minimal for the foreseeable future. To the extent that revenues are realized from our non-invasive prenatal diagnostics technology or from our prior disease gene discoveries, if at all, they may fluctuate significantly as revenues will be based upon the occurrence of certain milestones, our reliance upon and the progress made by our collaborative partners, successful product development and commercialization, and product demand, all of which are uncertain and difficult to predict. As a result, our entitlement to, and the timing and amounts of, any licensing and milestone payments and royalty or revenue sharing payments on future product sales are uncertain and difficult to predict. To achieve such revenues we will likely be dependent upon the efforts, resources and success of present and future collaborators and licensees who may need to invest significant dollar amounts in research and development efforts, commercialization efforts, clinical trials, and obtaining regulatory approvals over several years. Such revenues, if any, are uncertain and also depend on many factors as described in Item 1A of this report under the caption "Risk Factors."

We have a history of recurring losses from operations and have an accumulated deficit of $460.1 million as of December 31, 2006. Our capital requirements to sustain operations, including research and development projects, have been and will continue to be significant. As of December 31, 2006, we had available cash and short-term investments totaling $24.9 million and working capital of $23.7 million.

In June 2006, we closed a private placement financing that provided us with approximately $30 million of net proceeds from the sale of common stock and warrants to purchase shares of common stock.

Critical Accounting Policies

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions in certain circumstances that affect amounts reported in the accompanying consolidated financial statements and related notes. Certain of these accounting policies that we believe are the most critical to our investors' understanding of our financial results and condition are discussed below. Our significant accounting policies are more fully described in Note 2 to our Consolidated Financial Statements included elsewhere in this report. In preparing these financial statements, management uses its judgment to determine the appropriate assumptions to be used in the determination of certain estimates. The application of these accounting policies involves the exercise of judgment and use of estimates and assumptions as to future uncertainties and, as a result, actual results could differ from these estimates.

Revenue Recognition

We follow the provisions as set forth by current accounting rules, which primarily include the Securities and Exchange Commission's Staff Accounting Bulletin, or SAB, No. 104, "Revenue Recognition." In accordance with SAB No. 104, revenues are recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed and determinable, and collectibility is reasonably assured. We consider EITF 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables", and for MassARRAY system sales, the arrangement consideration is allocated among the separate units of accounting based on their relative fair values. The separate units of accounting are typically the system and software itself and maintenance contracts sold at the time of the system sale. Revenue is deferred for fees received before earned. Revenues from sales of consumables are recognized generally upon shipment and transfer of title to the customer. Revenue from sales of MassARRAY systems with standard payment terms of net 30 days are recognized upon shipment and transfer of title to the customer or when all revenue recognition criteria are met. Our contracts do not contain refund or cancellation clauses. Revenues from the sale or licensing of our proprietary software are recognized upon transfer of title to the customer or the duration of the software license. We recognize revenue on maintenance services for ongoing customer support over the maintenance period. Revenues from genetic services are recognized at the completion of key stages in the performance of the service, which is generally delivery of SNP assay information. Grant revenue is recorded as the research expenses relating to the grants are incurred, provided that the amounts received are not refundable if the research is not successful. Amounts received that are refundable if the research is not successful would be recorded as deferred revenue and recognized as revenue upon the grantor's acceptance of the success of the research results.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Significant estimates are as follows:

- *Accrued acquisition and integration costs.* To the extent that exact amounts were not determinable at the time of acquisition, we estimated amounts for direct costs of the acquisition of Gemini Genomics and Axiom Biotechnologies and the related integration costs in accordance with EITF 95-3, "Recognition of Liabilities in Connection with a Purchase Business Combination" and SFAS No. 141, "Business Combinations". Amounts accrued relating to acquisition and integration costs totaled $27.4 million and as of December 31, 2006 approximately $1.0 million remained accrued. The amount accrued at December 31, 2006 represents our remaining lease payments, net of estimated sublease income of $1.1 million from existing subleased space. If we do not receive all the amounts due to us under non-cancelable subleases, we will incur additional expense.

- *Impairment of long-lived assets.* We periodically re-evaluate the original assumptions and rationale utilized in the establishment of the carrying value and estimated lives of our long-lived assets. The criteria used for these evaluations include management's estimate of the asset's continuing ability to generate income from operations and positive cash flows in future periods as well as the strategic significance of any intangible assets in our business objectives. If assets are considered to be impaired, the impairment recognized is the amount by which the carrying value of the assets exceeds the fair value of the assets. An impairment charge of $0.3 million related to intangible assets acquired from Axiom, which were determined to have no alternative future use was recorded in 2004 following the closure of our internal drug discovery program. No impairment of long-lived assets was recorded in 2005 or 2006. Intangible assets totaled $0.4 million, net of accumulated amortization, at December 31, 2006.
- *Reserves for obsolete and slow-moving inventory.* We operate in an industry characterized by rapid improvements and changes to technology and products. The introduction of new products by us or our competitors can result in our inventory being rendered obsolete or requiring us to sell items at a discount to cost. We estimate the recoverability of our inventory by reference to our internal estimates of future demands and product life cycles. If we incorrectly forecast demand for our products or inadequately manage the introduction of new product lines, we could materially impact our financial statements by having excess inventory on hand. Our future estimates are subjective and could be incorrect. During 2006, slow-moving inventory reserves of $0.7 million were offset against cost of goods sold, and the total reserve was $1.1 million at December 31, 2006.

New Accounting Pronouncements

In July 2006, the Financial Accounting Standards Board (FASB) issued FASB Interpretation (FIN) No. 48, *Accounting for Uncertainty in Income Taxes—an interpretation of FASB Statement No. 109*, which clarifies the accounting for uncertainty in tax positions. FIN No. 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 No. 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 are currently evaluating the impact of the adoption of the interpretation and do not expect the adoption of FIN No. 48 to have a material impact on our consolidated results of operations and financial position.

In September 2006, the SEC issued SAB No. 108, *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements*, which provides interpretive guidance on the consideration of the effects of prior year misstatements in quantifying current year misstatements for the purpose of a materiality assessment. SAB No. 108 is effective for fiscal years ending after November 15, 2006. We do not expect the adoption of SAB No. 108 to have a material impact on our consolidated results of operations and financial position.

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements*. SFAS No. 157 defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles and expands disclosures about fair value measurements. This Statement applies only to fair value measurements that are already required or permitted by other accounting standards. Accordingly, this Statement does not require any new fair value measurements. SFAS No. 157 is effective for fiscal years beginning after December 15, 2007. We are currently evaluating the impact, if any, the adoption of SFAS No. 157 will have on our consolidated results of operations and financial position.

Results of Operations
Years ended December 31, 2006 and 2005

Revenues

Total revenues were $28.5 million and $19.4 million for the years ended December 31, 2006 and 2005, respectively. MassARRAY and other product related revenues are derived from the sale of MassARRAY systems, consumables, sales and licensing of our proprietary software, maintenance contracts, and license fees from end-users.

Consumable sales increased to $12.9 million in 2006 from $11.0 million in 2005. The increase in 2006 compared to 2005 was a result of an increase in our installed base of MassARRAY Compact systems as well as demand for our iPLEX assay.

MassARRAY and other product related revenue increased to $14.1 million in 2006 from $8.1 million in 2005. The increase of $6.0 million was primarily due to an increase in MassARRAY system hardware and software sales to $11.9 million in 2006 from $5.6 million in 2005. Revenue from other product sales, including MassARRAY system maintenance contracts, license fees and royalties, for the years ended December 31, 2006 and 2005 was $2.2 million and $2.5 million, respectively.

As of December 31, 2005, we had shipped inventory, consisting primarily of hardware, with a cost of $1.3 million to certain customers in respect of purchase orders or contracts received which did not meet our criteria for revenue recognition. We recognized $2.4 million of revenue in respect of these shipments upon receipt of payment from or delivery of software products to these customers during the year ended December 31, 2006.

We recorded genetic analysis service revenues of $1.0 million for the year ended December 31, 2006. We recorded no service revenues for the year ended December 31, 2005. We expect service revenues to continue to increase during 2007.

Research and other revenue was $0.4 million in 2006 and 2005. During the year ended December 31, 2006, we recognized $0.3 million of revenue related to the license of certain proprietary genetic content to a third party. The timing of research revenues depends upon our expenditures on grant research and the receipt of the grant funding from the sponsoring agencies. We expect grant revenue to be minimal going forward.

Domestic and non-U.S. revenues were $16.0 million and $12.5 million, respectively, for the year ended December 31 2006 and $10.2 million and $9.2 million, respectively, for the year ended December 31, 2005.

Our revenues have historically fluctuated from period to period and likely will continue to fluctuate substantially in the future based upon the unpredictable sales cycle for the MassARRAY Compact system, revenue recognition criteria, and the overall acceptance and demand for our new and existing commercial products and services.

Cost of Product and Service Revenues and Gross Margins

Cost of product revenues were $11.4 and $10.4 million and gross margins were 58% and 46% for the years ended December 31, 2006 and 2005, respectively. Gross margins primarily increased due to lower charges to obsolescence reserves resulting from improvement in inventory management.

We believe that gross margin in future periods will be affected by, among other things, the selling price for systems and consumables, consumable sales per MassARRAY system sold, the mix of products sold, competitive conditions, sales volumes, discounts offered, inventory reserves and obsolescence charges required and royalty payment obligations on in-licensed technologies.

Cost of service revenues were $0.5 million and gross margins were 49%, respectively, for the year ended December 31, 2006. There were no service revenues or cost of service revenues for the year ended December 31, 2005. Gross margins are dependent on the particular service contract terms of the work undertaken in each year.

Research and Development Costs

Research and development costs were $11.9 million for both years ended December 31, 2006 and 2005. These expenses consist primarily of salaries and related personnel expenses, improvements to our existing products, validation of products under development, and expenses relating to work performed under research contracts.

Research and development expenses in 2006 compared to 2005 were primarily affected by increased operating supplies of $0.4 million and consultant and collaboration costs of $0.7 million related to our non-invasive prenatal technology development and MassARRAY product development. These increases were offset by reductions in headcount costs of $0.4 million and allocated costs of $0.7 million.

We expect our research and development expenses to increase during 2007 as we increase our investment in the development of non-invasive prenatal nucleic acid based tests and as we continue to invest in new products and applications for our MassARRAY platform.

Sales and Marketing Costs

Sales and marketing costs were $11.0 million for both years ended December 31, 2006 and 2005. These expenses consist primarily of salaries and related expenses for sales and marketing, customer support, and business development personnel and their related department expenses.

Sales and marketing expenses in 2006 compared to 2005 were primarily affected by increased costs of $0.3 million related to the establishment of a sales office in China, legal costs of $0.1 million and share-based payments and other costs of $0.3 million. These increases were offset by reductions in headcount costs of $0.2 million, allocated expenses of $0.2 million and public relations expenses of $0.3 million.

We expect our sales and marketing headcount and associated expense to increase in 2007 as we strengthen our sales force for our MassARRAY system and as we build our commercial development team for our non-invasive prenatal nucleic acid based tests.

General and Administrative Costs

General and administrative costs were $11.4 million for both of the years ended December 31, 2006 and 2005. These expenses consist primarily of salaries and related expenses for legal, finance, and human resource personnel, and their related department expenses.

General and administrative expenses in 2006 compared to 2005 were primarily affected by increased share-based payments of $0.6 million, bad debt expense of $0.2 million and allocated costs of $0.2 million. These increases were partially offset by reduced headcount costs of $0.8 million and lower insurance costs due to reduced premiums of $0.2 million.

We expect general and administrative costs to increase in 2007, compared to 2006 as we build our infrastructure in order to support our anticipated growth.

Asset Impairment and Restructuring Charges

During the third quarter of 2005, we introduced a cost reduction plan, which included a reduction of existing headcount by approximately 30 across all departments by the end of 2005. We incurred a charge of $0.8 million in 2005 relating to severance and related expenses in connection with this headcount reduction. At December 31, 2005, we had an accrued balance of $0.3 million in respect of the restructuring charges representing the remaining payout of severance costs. We paid the remaining amounts due during 2006.

During the third quarter of 2004, we closed our Sequenom Pharmaceuticals business segment. During the first quarter of 2005, we sold certain tangible assets and recovered $0.2 million in excess of the carrying value, which we had previously fully provided for as part of the restructuring charge.

Amortization of Acquired Intangibles

In connection with the acquisition of Gemini Genomics, plc in 2001, we acquired approximately $18.7 million of intangible assets, including clinical data collections and patent rights. Our intangible assets are being amortized over three to five years. The 2006 and 2005 amortization charges of $1.5 million and $2.0 million, respectively, represents the amortization of all these assets held throughout the respective year.

Interest Income

Interest income was $0.9 million in 2006 compared to $0.6 million in 2005. The increase was primarily due to the increased cash balance as a result of our private placement of common stock and warrants in June 2006.

Interest Expense

Interest expense was $20,000 in 2006 compared to $0.3 million in 2005. The decreases resulted from our lower level of borrowings as we paid off our capital leases. In December 2005, we paid the remaining balance of $4.3 million under our credit facility with a financial institution. As a result, our interest expense declined in 2006.

Deferred Income Tax Benefit

The deferred tax benefit of $0.6 million and $0.9 million for the years ended December 31, 2006 and 2005, respectively, were primarily due to the amortization on the intangible assets, including clinical data collections and patent rights, acquired from Gemini Genomics.

At December 31, 2006, we had federal and state tax net operating loss carryforwards of approximately $229.2 million and $114.3 million, respectively. The federal tax loss carryforwards will begin to expire in 2008 unless previously utilized. Approximately $0.5 million of the state tax loss carryforwards will expire in 2007 and the state tax loss carry-forwards will continue to expire in 2008 unless previously utilized. We incurred a federal and state capital loss on the disposal of two of our foreign subsidiaries in 2002 totaling $2.5 million. The capital loss carryforward will expire in 2008. We also have German and United Kingdom (UK) net operating loss carryforwards of approximately $9.5 million and $35.6 million, respectively, which may be carried forward indefinitely. We also have federal and state research and development tax credit carryforwards of approximately $7.9 million and $7.1 million, respectively. The federal research and development tax credit carryforwards will begin to expire in 2011 unless previously utilized. Pursuant to Internal Revenue Code Sections 382 and 383, use of our federal net operating loss and credit carryforwards may be limited due to a cumulative change in ownership of more than 50% within a three-year period.

Years ended December 31, 2005 and 2004

Revenues

Total revenues were $19.4 million and $22.4 million for the years ended December 31, 2005 and 2004, respectively.

Consumable sales decreased to $11.0 million in 2005 from $13.2 million in 2004. The decrease in consumables revenue in 2005, compared to 2004 was a result of a decline in our average selling prices and volumes for our SpectroCHIP bioarray chips and other consumables.

MassARRAY and other product related revenue increased to $8.1 million in 2005 from $7.9 million in 2004. The increase of $0.2 million was primarily due to an increase in MassARRAY system hardware and software sales to $5.6 million in 2005 from $4.9 million in 2004. Revenue from other product sales, including

MassARRAY system maintenance contracts, license fees and royalties, for the years ended December 31, 2005 and 2004 was $2.5 million and $3.0 million, respectively.

As of December 31, 2005, we had shipped inventory, consisting primarily of hardware, with a cost of $1.3 million to certain customers in respect of purchase orders or contracts received which did not meet our criteria for revenue recognition. We recognized $2.4 million of revenue in respect of these shipments upon receipt of payment from or delivery of software products to these customers during 2006.

Research revenue decreased from $1.2 million in 2004 to $0.4 million in 2005. We performed more work on our grants in 2004 as our largest collaborator began to transfer samples to us for investigation. The timing of research revenues depends upon our expenditures on grant research and the receipt of the grant funding from the sponsoring agencies.

Domestic and non-U.S. revenues were $10.2 million and $9.2 million, respectively, for the year ended December 31 2005 and $10.8 million and $11.7 million, respectively, for the year ended December 31, 2004. Our distribution contract with one Asia-based distributor, representing $2.3 million of revenue in 2004, expired on December 31, 2004. Revenue for this same distributor was $0.7 million in 2005.

Cost of Product and Service Revenues and Gross Margins

Cost of product revenues were $10.4 million and $11.2 million and gross margins were 46% and 47% for the years ended December 31, 2005 and 2004, respectively.

During 2005, higher-margin consumables constituted 58% of the mix of products sold, down from 63% in 2004, while lower-margin hardware sales increased to 27% in 2005 from 20% in 2004. This change in product mix resulted in lower overall margins in 2005, as compared to 2004.

Cost of service revenues were $0.2 million and gross margins were -3% for the year ended December 31, 2004. There were no service revenues or cost of service revenues for the year ended December 31, 2005. Gross margins are dependent on the particular service contract terms of the work undertaken in each year.

Research and Development Costs

Research and development costs decreased by $6.7 million to $11.9 million for the year ended December 31, 2005 from $18.6 million in the year ended December 31, 2004. These expenses consist primarily of salaries and related personnel expenses, improvements to our existing products and validation of products under development, expenses relating to work performed under research contracts, and, prior to the termination of our internal drug discovery activities in July of 2004, expenses related to our disease gene discovery and development programs.

The reduction in costs from 2004 to 2005 of $6.7 million resulted from a reduction in operating supplies of $1.5 million following the closure of our disease gene discovery program in July 2004, $1.9 million in depreciation as assets reached the end of their useful life, and $3.4 million in headcount related costs due to headcount reduction. These decreases were offset by $0.5 million of expenses associated with the acquisition of the non-invasive prenatal intellectual property rights from Isis Innovation Ltd. in October 2005.

Sales and Marketing Costs

Sales and marketing costs decreased by $0.2 million to $11.0 million in the year ended December 31, 2005 from $11.2 million in the year ended December 31, 2004. These expenses consist primarily of salaries and related expenses for sales and marketing, customer support, and business development personnel and their related department expenses.

The decrease in expense of $0.2 million from 2004 to 2005 was primarily due to reduction in foreign selling expenses of $0.2 million following a reduction in headcount in 2005, reduced consulting costs of $0.3 million as

consulting projects were eliminated, increased absorption into cost of goods sold of $0.1 million, and reduced travel costs of $0.2 million. These reductions were offset by increased U.S. headcount-related expenses of $0.6 million.

General and Administrative Costs

General and administrative costs decreased by $0.8 million to $11.4 million in the year ended December 31, 2005 from $12.2 million in the year ended December 31, 2004. These expenses consist primarily of salaries and related expenses for legal, finance, and human resource personnel, and their related department expenses.

The decrease from 2004 to 2005 of $0.8 million related to cost savings in legal fees of $0.5 million due to reduced patent portfolio expenses, decreased building operating costs of $0.3 million, increased absorption into cost of goods sold of $0.5 million, and lower insurance costs due to reduced premiums of $0.3 million. These reductions were offset by increased headcount costs of $0.3 million, increased property taxes of $0.3 million, and other expenses of $0.2 million.

Asset Impairment and Restructuring Charges

During the third quarter of 2005, we introduced a cost reduction plan, which included a reduction of existing headcount by approximately 30 across all departments by the end of 2005. We incurred a charge of $0.8 million in 2005 relating to severance and related expenses in connection with this headcount reduction.

We terminated our internal drug discovery efforts during the third quarter of 2004, which reduced our headcount by approximately 50 by the end of 2004. During 2004, we incurred total charges of $2.2 million related to the closure of these activities. Of the $2.2 million charge, $1.4 million related to non-cash charges from the write-off of $1.1 million on equipment taken out of service, $0.3 million related to intangible assets of no value to our ongoing business and $0.8 million related to employee severance costs and other contractual obligations. During the first quarter of 2005, we sold certain tangible assets and recovered $0.2 million in excess of the carrying value, which we had previously fully provided for as part of the restructuring charge.

Amortization of Acquired Intangibles

In connection with the acquisition of Gemini Genomics, plc in 2001, we acquired approximately $18.7 million of intangible assets, including clinical data collections and patent rights. Our intangible assets are being amortized over three to five years. The 2005 and 2004 amortization charges of $2.0 million and $3.1 million, respectively, represents the amortization of all these assets held throughout the respective year. The reduction in expense is primarily due to an adjustment to the carrying value of assets related to the Gemini acquisition of $2.6 million in 2004.

Interest Income

Interest income was $0.6 million in 2005, compared to $0.8 million in 2004. The decrease resulted from lower interest rates and lower average balances of interest-bearing investments.

Interest Expense

Interest expense was $0.3 million in 2005, compared to $0.4 million in 2004. The decrease resulted from our lower level of borrowings as we paid off our capital leases. In December 2005, we paid the remaining balance of $4.3 million under our credit facility with a financial institution.

Deferred Income Tax Benefit

The deferred tax benefit of $0.9 million and $1.2 million for the years ended December 31, 2005 and 2004, respectively, were due to the amortization on the intangible assets, including clinical data collections and patent rights, acquired from Gemini Genomics.

Liquidity and capital resources

As of December 31, 2006, cash, cash equivalents, short-term investments and restricted cash totaled $26.3 million, compared to $8.7 million at December 31, 2005. Our cash reserves are held in a variety of interest-bearing instruments, including auction rate securities and money market accounts.

We have a history of recurring losses from operations and have an accumulated deficit of $460.1 million as of December 31, 2006. Our capital requirements to sustain operations, including research and development projects, have been and will continue to be significant. As of December 31, 2006, we had available cash and short-term investments totaling $24.9 million and working capital of $23.7 million. As of December 31, 2005, we had available cash and short-term investments of $6.0 million and working capital of $5.4 million.

Through December 31, 2006, we funded our capital requirements primarily with the net proceeds of our initial public offering of common stock of approximately $144 million, with private placements of equity securities of approximately $86 million, and with $61 million from the acquisition of Gemini Genomics in 2001.

In June 2006, we closed a private placement financing that provided us with approximately $30 million of net proceeds from the sale of common stock and warrants to purchase shares of common stock.

We consider the material drivers of our cash flow to be sales volumes, inventory management and operating expenses. Our principal sources of liquidity are our cash, cash equivalents and short-term investments. Cash used in operations for year ended December 31, 2006 was $10.7 million compared to $19.2 million for 2005. The use of cash was primarily a result of the net loss of $17.6 million for year ended December 31, 2006, increased by $0.7 million of deferred income tax benefit, an increase in accounts receivable balances of $2.5 million due to timing of sales activity, and a $0.3 million reduction in other liabilities. Cash usages were partially offset by non-cash depreciation and amortization of $3.6 million, stock-based compensation of $1.2 million, deferred rent of $2.4 million, other non-cash items of $0.8 million, reductions of $1.7 million in inventory levels from inventory management and valuation reserves, and increases in accounts payable and deferred income of $0.4 million. At our current and anticipated level of operating loss, we expect to continue to incur an operating cash outflow on a quarterly basis for the foreseeable future.

Investing activities, other than the changes in our short-term investments and restricted cash, used $1.2 million in cash during the year ended December 31, 2006 compared to $2.2 million for the same period of 2005 related to the purchases of capital equipment.

Net cash provided by financing activities was $29.5 million during the year ended December 31, 2006 compared to $7.8 million used by financing activities for the same period in 2005. Financing activities during the year ended December 31, 2006 included net receipts of $29.9 million from the issuance of common stock and warrants to purchase common stock, partially offset by net payments of $0.4 million for long-term debt and capital lease obligations.

The following table summarized our contractual obligations as of December 31, 2006 ($ in thousands):

Contractual obligations	Total	Less Than 1 Year	1-3 Years	After 3 Years
Open purchase orders	$ 5,205	$5,205	$ —	$ —
Operating leases	44,393	3,905	11,858	28,630
Total contractual obligations	$49,598	$9,110	$11,858	$28,630

Future operating lease commitments for leases have not been reduced by future minimum sublease rentals to be received through December 2010 aggregating $1.1 million. Open purchase orders are primarily for inventory items and research and development supplies.

In September 2005, we entered into an amendment to our lease for our corporate headquarters in San Diego. The lease amendment provides for the deferral of approximately $3.2 million of the monthly rent payments by reducing the monthly payments through September 30, 2007 and increasing the aggregate monthly payments by the deferred amount for the remaining term of the lease, from October 1, 2007 to September 30, 2012. The total obligation under the lease remains unchanged. The contractual obligation table above reflects the deferral of these rent payments.

Other commitments and contingencies that may result in contractual obligations to pay are described in the notes to our consolidated financial statements included elsewhere in this report.

We believe our cash, cash equivalents and short-term investments will be sufficient to fund our operating expenses, debt obligations and capital requirements through 2008. However, based on our current plans, we will require additional investment that we have not yet secured. The actual amount of funds that we will need will be determined by many factors, some of which are beyond our control, and we may need funds sooner than currently anticipated. These factors include but are not limited to:

- the size of our future operating losses;
- the level of our success in selling our MassARRAY products and services;
- our ability to introduce and sell new products and services, and successfully reduce inventory levels of earlier products;
- the level of our selling, general and administrative expenses;
- our success in and the expenses associated with researching and developing diagnostic products, alone or in collaboration with our partners, and obtaining any required regulatory approval for those products;
- the extent of our research and development pursuits, including our level of investment in MassARRAY product research and development, and non-invasive prenatal diagnostic technology research and development;
- the extent to which we enter into, maintain, and derive revenues from licensing agreements, including agreements to out-license our disease gene discoveries, research and other collaborations, joint ventures and other business arrangements;
- the extent to which we acquire, and our success in integrating, technologies or companies;
- the level of our legal expenses including those expenses associated with litigation and with intellectual property protection; and
- regulatory changes and technological developments in our markets.

We had a $3.5 million bank line of credit provided by the Union Bank of California, which expired on January 31, 2006. At December 31, 2006, we had outstanding stand-by letters of credit with financial institutions totaling $1.2 million, related to our building and operating leases. Letters of credit amounting to $0.1 million will not be drawn down unless we default upon our obligations under the respective agreements. An operating lease letter of credit of $1.1 million will remain in place until the expiration of our Newton, Massachusetts building lease agreement in December 2010.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Short-term investments

The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive from our investments without significantly increasing risk. Some of the securities that we invest in may have market risk. This means that a change in prevailing interest rates may cause the fair value of the principal amount of the investment to fluctuate. For example, if we hold a security that was

issued with a fixed interest rate at the then-prevailing rate and interest rates later rise, the fair value of the principal amount of our investment will probably decline. To minimize this risk in the future, we intend to maintain our portfolio of cash equivalents and short-term investments in a variety of securities, including commercial paper, money market funds, government and non-government debt securities rated BBB or above by Standard & Poors. Our investment policy includes a minimum quality rating for all new investments. If an investment we hold falls below this level, we research the reasons for the fall and determine if we should continue to hold the investment in order to minimize our exposure to market risk of the investment. We have not experienced any significant losses in our investment portfolio as a result of rating changes. The average duration of all of our investments has generally been less than one year. Due to the short-term nature of these investments, we believe we have no material exposure to interest rate risk arising from our investments. Therefore, no quantitative tabular disclosure is provided.

Foreign currency rate fluctuations

We have foreign subsidiaries whose functional currencies are the Great British Pound, or GBP, and the Euro, or EUR. The subsidiaries' accounts are translated from the relevant functional currency 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 as a separate component of stockholders' equity. Our subsidiaries conduct their business with customers in local currencies. Exchange gains and losses arising from these transactions are recorded using the actual exchange 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 subsidiaries or transactions with our customers where the invoicing currency is not the U.S. dollar.

The table below sets forth our currency exposure (i.e., those transactional exposures that give rise to the net currency gains and losses recognized in the income and expenditure account) on our net monetary assets and liabilities. These exposures consist of our monetary assets and liabilities that are not denominated in the functional currency used by us or our subsidiary having the asset or liability.

	As of December 31, 2006 Net foreign monetary assets/(liabilities)		
Functional currency of operations	Euro	U.S. dollars	GBP
		($ in millions)	
Euro	—	$0.5	$0.5

A movement of 10% in the U.S. dollar to GBP exchange rate would create an unrealized gain or loss of approximately $47,000. A movement of 10% in the U.S. dollar to Euro exchange rate would create an unrealized gain or loss of approximately $53,000. We had no off balance sheet, or unrecognized, gains and losses in respect of financial instruments used as hedges at the beginning or end of the year ended December 31, 2006. We had no deferred gains or losses during the years ended December 31, 2006, 2005 or 2004.

Inflation

We do not believe that inflation has had a material adverse impact on our business or operating results during the periods presented.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our consolidated financial statements and the Reports of Ernst & Young LLP, our Independent Registered Public Accounting Firm, are included in this report on Pages F-1 through F-28.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

We have established and maintain disclosure controls and procedures that are designed to ensure that we record, process, summarize, and report information we are required to disclose in our periodic reports filed with the Securities and Exchange Commission in the manner and within the time periods specified in the SEC's rules and forms. We also design our disclosure controls to ensure that the information is accumulated and communicated to our management, including the principal executive officer and the principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. We also maintain internal controls and procedures that are designed to ensure that we comply with applicable laws and our established financial policies. We design our internal controls to provide reasonable assurance that (1) our transactions are properly authorized; (2) our assets are safeguarded against unauthorized or improper use; and (3) our transactions are properly recorded and reported in conformity with accounting principles generally accepted in the United States.

We have evaluated the design and operation of our disclosure controls and procedures to determine whether they are effective in ensuring that the disclosure of required information is timely made in accordance with the Exchange Act and the rules and regulations of the Securities and Exchange Commission. This evaluation was made under the supervision and with the participation of management, including our principal executive officer and principal financial officer, as of December 31, 2006. Our management does not expect that our disclosure controls or our internal controls will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Our principal executive officer and principal financial officer have concluded, based on their review, that our disclosure controls and procedures, as defined by Exchange Act Rules 13a-15(e) and 15d-15(e), were effective as of December 31, 2006 to ensure that information required to be disclosed by us in reports that we file under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

An evaluation was also performed under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of any change in our internal control over financial reporting that occurred during our last fiscal quarter and that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. That evaluation did not identify any such change.

Item 9B. OTHER INFORMATION

None

PART III

Certain information required by Part III is omitted from this report because we will file with the Securities and Exchange Commission a definitive proxy statement within 120 days after the end of our fiscal year for our annual meeting of stockholder (the "Proxy Statement"), and the information included in the Proxy Statement is incorporated herein by reference.

Item 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this item regarding directors is incorporated by reference to our Proxy Statement under the heading "Election of Directors." Information regarding executive officers is set forth in Item 1 of Part 1 of this report and is included herein by reference.

We have adopted a code of business conduct and ethics for directors, officers (including our principal executive, financial and accounting officers) and all employees, which we refer to as our Code of Business Conduct and Ethics. The Code of Business Conduct and Ethics is available on our website at http://www.sequenom.com. Stockholders may request a free copy of our Code of Business Conduct and Ethics from:

Sequenom, Inc.
Attention: Investor Relations
3595 John Hopkins Court
San Diego, CA 92121-1331
(858) 202-9000

If we make any substantive amendments to the code of business conduct and ethics or grant any waiver from a provision of the code to any executive officer or director, we will promptly disclose the nature of the amendment or waiver on our website. We will promptly disclose on our website (i) the nature of any amendment to the policy that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions and (ii) the nature of any waiver, including an implicit waiver, from a provision of the policy that is granted to one of these specified individuals, the name of such person who is granted the waiver and the date of the waiver.

Section 16(a) Beneficial Ownership Reporting Compliance

Item 405 of Regulation S-K calls for disclosure of any known late filing or failure by an insider to file a report required by Section 16 of the Exchange Act. This disclosure is incorporated by reference from the information in the section entitled "Section 16(a) Beneficial Ownership Reporting Compliance" in the Proxy Statement.

Item 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference from the information in the section entitled "Executive Compensation" in the Proxy Statement.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Securities Authorized for Issuance under Equity Compensation Plans

The following table provides certain information with respect to all of our equity compensation plans in effect as of December 31, 2006.

Equity Compensation Plan Information

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	16,017,470	$2.43	4,641,295[1][2]
Equity compensation plans not approved by security holders	— [3]	— [3]	—
Total	16,017,470	$2.43	4,641,295

Footnotes

(1) Of the 4,651,295 shares available for issuance, 662,596 are reserved for issuance under our 1999 Employee Stock Purchase Plan, or ESPP.

(2) Evergreen provisions:

ESPP Provision

The number of shares of our common stock available for issuance under the ESPP shall automatically increase on the first trading day of January each calendar year during the term of the ESPP, beginning with calendar year 2001, by an amount equal to one percent (1%) of the total number of shares of our common stock outstanding on the last trading day in December of the immediately preceding calendar year, but in no event shall any such annual increase exceed 166,667 shares.

(3) Excludes outstanding options and warrants that were acquired in conjunction with our acquisition of Gemini Genomics in 2001 and Axiom Biotechnologies in 2002.

In connection with our acquisition of Gemini Genomics, a total of 184,195 options to purchase our common stock remain outstanding at a weighted average price of $52.76. Of these, 3,932 shares are reserved for issuance under the Gemini Genomics Company Share Option Plan-Part B, 4,845 shares are reserved for issuance under the Gemini International Executive Share Option Plan, 175,418 shares are reserved for issuance outside the plan.

In connection with our acquisition of Axiom Biotechnologies, a total of 14,012 options to purchase our common stock remain outstanding at a weighted average price of $13.32, 12,477 shares are reserved for issuance outside of the plan, and 1,535 shares are reserved for issuance under a warrant agreement.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this item is incorporated herein by reference from the information in the section entitled "Certain Transactions" in the Proxy Statement.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated herein by reference from the information in the section entitled "Principal Accountant Fees and Services" in the Proxy Statement.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) *Financial Statements*

The financial statements of Sequenom, Inc. are included herein as required under Item 8 of this report. See Index to Financial Statements on page F-1.

(a)(2) *Financial Statement Schedules*

Schedule II—Valuation and Qualifying Accounts. The other financial statement schedules have been omitted because they are either not required, not applicable, or the information is otherwise included.

(3) *Exhibits*

The exhibits listed below are required by Item 601 of Regulation S-K. Each management contract or compensatory plan or arrangement required to be filed as an exhibit to this report has been identified.

Exhibit Number	Description of Document
3.1[26]	Amended and Restated Certificate of Incorporation of the Registrant.
3.2[26]	Bylaws of Registrant, as amended.
4.1[26]	Specimen common stock certificate.
4.2[7]	Rights Agreement dated as of October 22, 2001 between the Registrant and American Stock and Transfer & Trust Company.
4.3[22]	Amendment to Rights Agreement dated March 27, 2006 between the Registrant and American Stock Transfer & Trust Company.
10.1[1]	Form of Warrant Agreement between the Registrant and holders of the Series C Preferred Stock warrants.
10.2[26]	Form of Indemnification Agreement between the Registrant and each of its officers and directors.
10.3[1]#	1994 Stock Plan.
10.4[1]#	1994 Stock Plan Form of Non-Qualified Stock Option Grant.
10.5[1]#	1994 Stock Plan Form of Incentive Stock Option Grant.
10.6[1]#	1994 Stock Plan Form of Stock Restriction Agreement.
10.7[1]#	1998 Stock Option/Stock Issuance Plan.
10.8[1]#	1998 Stock Option/Stock Issuance Plan Form of Notice of Grant of Stock Option.
10.9[1]#	1998 Stock Option/Stock Issuance Plan Form of Stock Option Agreement.
10.10[1]#	1998 Stock Option/Stock Issuance Plan Form of Stock Purchase Agreement.
10.11[1]#	1998 Stock Option/Stock Issuance Plan Form of Stock Issuance Agreement.
10.12#	1999 Stock Incentive Plan, as amended.
10.13[1]#	1999 Employee Stock Purchase Plan.
10.14[1]#	1999 Stock Incentive Plan Form of Notice of Grant of Stock Option.
10.15[1]#	1999 Stock Incentive Plan Form of Stock Option Agreement.

Exhibit Number	Description of Document
10.16[26]#	2006 Equity Incentive Plan.
10.17[26]#	2006 Equity Incentive Plan Form of Notice of Grant of Stock Option.
10.18[26]#	2006 Equity Incentive Plan Form of Stock Option Agreement.
10.19[26]#	2006 Equity Incentive Plan Form of Exercise Notice.
10.20[2]	Business Loan Agreement, dated March 3, 2000, between the Registrant and Union Bank of California.
10.21[3]	Building Lease Agreement, dated March 29, 2000, between the Registrant and TPSC IV LLC, a Delaware limited liability company.
10.22[4]	Global Master Rental Agreement, dated May 4, 2000, between the Registrant and Comdisco.
10.23[6]#	First Amended and Restated Employment Agreement, dated as of August 1, 2000 between Andi Braun and the Registrant.
10.24[5]#	Employment Agreement between Registrant and Charles Cantor, Ph.D.
10.25[8]*	Collaboration Agreement, dated December 17, 2003, by and between the Registrant and Procter & Gamble Pharmaceuticals, Inc.
10.26[10]#	Exec-U-Care Plan.
10.27[29]#	Employment Agreement, dated July 19, 2004, by and between the Registrant and Clarke Neumann.
10.28[11]*	Diagnostic Platform Benchmarking Study and Evaluation, dated October 25, 2004, by and between the Registrant and Siemens AG.
10.29[11]#	Form of Stock Issuance Agreement under 1999 Stock Incentive Plan.
10.30[12]#	Separation Agreement, dated February 11, 2005, by and between the Registrant and Antonius Schuh, Ph.D.
10.31[14]#	Description of Bonus Program.
10.32[14]#	Second Amended and Restated Employment Agreement, dated April 28, 2005, by and between the Registrant and Steve Zaniboni.
10.33[14]#	Change in Control Severance Benefit Plan.
10.34[15]#	Employment Agreement, dated May 31, 2005, by and between the Registrant and Harry Stylli, Ph.D.
10.35[16]#	Separation Agreement, dated August 15, 2005, by and between the Registrant and Michael Terry.
10.36[17]	Amendment Number One to Lease, dated March 29, 2000, by and between the Registrant and TPSC IV LLC dated September 9, 2005.
10.37[17]	Common Stock Warrant, dated September 9, 2005, issued to Kwacker, Ltd.
10.38[17]#	Employment Agreement Amendment, dated September 12, 2005, by and between the Registrant and Dr. Charles R. Cantor.
10.39[18]#	Separation Agreement, dated October 4, 2005, by and between the Registrant and Stephen L. Zaniboni.
10.40[19]*	License Agreement, dated October 14, 2005, by and between the Registrant and Isis Innovation Limited.

Exhibit Number	Description of Document
10.41[20]#	Letter agreement, dated October 25, 2005, signed by Lawrence R. Moreau.
10.42[21]#	Separation agreement, dated October 24, 2005, between the Registrant and Andreas Braun, M.D., Ph.D.
10.43[23]	Amended and Restated Securities Purchase Agreement, dated March 30, 2006, by and among the registrant, ComVest Investment Partners II LLC, LB I Group Inc., Pequot Private Equity Fund IV, L.P. and Siemens Venture Capital GmbH.
10.44[23]	Form of Warrant issued pursuant to the Amended and Restated Securities Purchase Agreement dated March 30, 2006.
10.45[24]#	Letter agreement dated April 6, 2006, by and between the Registrant and John E. Lucas.
10.46[25]#	Letter agreement dated April 21, 2006, by and between the Registrant and Lawrence R. Moreau.
10.47[26]	Registration Rights Agreement dated June 6, 2006 by and between the Registrant, ComVest Investment Partners II LLC, LB I Group Inc., Pequot Private Equity Fund IV, L.P. and Siemens Venture Capital GmbH.
10.48[27]#	Letter agreement dated August 21, 2006, by and between the Registrant and Paul W. Hawran.
10.49[28]*	Amendment to Exclusive License of Technology Agreement dated October 19, 2006, by and between the Registrant and ISIS Innovation Limited.
10.50[28]*	Supply Agreement dated November 3, 2006, by and between the Registrant and Bruker Daltonics Inc.
21.1[29]	Subsidiaries of the Registrant.
23.1	Consent of Independent Registered Public Accounting Firm.
31.1	Certification of Principal Executive Officer pursuant to Rule13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act, as amended.
31.2	Certification of Principal Financial Officer pursuant to Rule13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act, as amended.
32.1	Certification of Principal Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Principal Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

\# Management contract or compensatory plan.

* Certain confidential portions of this Exhibit have been omitted pursuant to a request for confidential treatment. Omitted portions have been filed separately with the Securities and Exchange Commission.

(1) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (No. 333-91665), as amended.

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

(3) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2000.

(4) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2000.

(5) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (No. 333-91665), as amended, which exhibit is hereby supplemented with an additional Schedule A filed with this Annual Report on Form 10-K.

(6) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2000.
(7) Incorporated by reference to the Registrant's Current Report on Form 8-K filed October 23, 2001.
(8) Incorporated by reference to the Registrant's Current Report on Form 8-K filed February 10, 2004.
(9) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2002.
(10) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2003.
(11) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004.
(12) Incorporated by reference to the Registrant's Current Report on Form 8-K filed February 14, 2004.
(13) Incorporated by reference to the Registrant's Registration Statement on Form S-8 (No. 333-125456).
(14) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2005.
(15) Incorporated by reference to the Registrant's Current Report on Form 8-K filed June 1, 2005.
(16) Incorporated by reference to the Registrant's Current Report on Form 8-K filed August 17, 2005.
(17) Incorporated by reference to the Registrant's Current Report on Form 8-K filed September 14, 2005.
(18) Incorporated by reference to the Registrant's Current Report on Form 8-K filed October 7, 2005.
(19) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2005.
(20) Incorporated by reference to the Registrant's Current Report on Form 8-K with respect to Items 1.01, 5.02 and 9.01 filed October 28, 2005.
(21) Incorporated by reference to the Registrant's Current Report on Form 8-K with respect to Items 1.01, 1.02 and 9.01 filed October 28, 2005.
(22) Incorporated by reference to the Registrant's Current Report on Form 8-K filed March 28, 2006.
(23) Incorporated by reference to the Registrant's Current Report on Form 8-K filed April 3, 2006.
(24) Incorporated by reference to the Registrant's Current Report on Form 8-K filed April 10, 2006.
(25) Incorporated by reference to the Registrant's Current Report on Form 8-K filed April 27, 2006.
(26) Incorporated by reference to the Registrant's Current Report on Form 8-K filed June 6, 2006.
(27) Incorporated by reference to the Registrant's Current Report on Form 8-K filed August 25, 2006.
(28) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2006.
(29) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.

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.

Date: March 30, 2007

SEQUENOM, INC.

By: /s/ HARRY STYLLI

Harry Stylli
President and Chief Executive Officer

POWER OF ATTORNEY

Know all men by these presents, that each person whose signature appears below constitutes and appoints Harry Stylli and John Sharp, and each of them, as his attorneys-in-fact and agents, each with power of substitution in any and all capacities, to sign any amendments to this annual report on Form 10-K, and to file the same with exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that the attorney-in-fact or his substitute or substitutes may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Signature	Title	Date
/s/ HARRY STYLLI PH.D. **Harry Stylli, Ph.D.**	President and Chief Executive Officer and Director (Principal Executive Officer)	March 30, 2007
/s/ JOHN SHARP **John Sharp**	Vice President, Finance and Treasurer (Principal Financial and Accounting Officer)	March 30, 2007
/s/ CHARLES R. CANTOR, PH.D. **Charles R. Cantor, Ph.D.**	Chief Scientific Officer and Director	March 30, 2007
/s/ HARRY F. HIXSON, JR., PH.D. **Harry F. Hixson, Jr., Ph.D.**	Chairman of the Board of Directors	March 30, 2007
/s/ ERNST-GUNTER AFTING, PH.D., M.D. **Ernst-Gunter Afting, Ph.D., M.D.**	Director	March 30, 2007
/s/ PATRICK ENRIGHT **Patrick Enright**	Director	March 30, 2007
/s/ RONALD M. LINDSAY, PH.D. **Ronald M. Lindsay, Ph.D.**	Director	March 30, 2007
/s/ LARRY LENIG **Larry Lenig**	Director	March 30, 2007

SEQUENOM, INC.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Sequenom, Inc.

We have audited the accompanying consolidated balance sheets of Sequenom, 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. These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements 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. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and 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 Sequenom, Inc. at December 31, 2006 and 2005 and the consolidated results of their operations and their 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 1 to the Consolidated Financial Statements, effective January 1, 2006, the Company changed its method of accounting for share-based payments in accordance with Statement of Financial Accounting Standards (SFAS) No. 123 (revised 2004), "Share-Based Payments."

/s/ ERNST & YOUNG LLP

San Diego, California
March 16, 2007

SEQUENOM, INC.

CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except share and per share information)

	December 31, 2006	December 31, 2005
Assets		
Current assets:		
Cash and cash equivalents	$ 1,932	$ 1,885
Short-term investments	22,996	4,158
Restricted cash and investments	1,402	2,571
Accounts receivable, net	4,834	2,321
Inventories, net	2,567	4,161
Other current assets and prepaid expenses	677	738
Total current assets	34,408	15,834
Equipment and leasehold improvements, net	4,528	5,621
Intangible assets	360	2,316
Restricted cash and investments	—	64
Other assets	585	601
Total assets	$ 39,881	$ 24,436
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 3,809	$ 3,532
Accrued expenses	5,140	4,981
Accrued acquisition and integration costs	230	226
Deferred revenue	1,578	1,299
Current portion of long-term bank debt	—	200
Current portion of capital lease obligations	—	193
Total current liabilities	10,757	10,431
Deferred revenue, less current portion	149	202
Other long-term liabilities	2,804	413
Long-term accrued acquisition and integration costs, less current portion	721	950
Long-term deferred tax liability	—	697
Commitments and contingencies		
Stockholders' equity:		
Convertible preferred stock, par value $0.001; authorized shares—5,000,000.	—	—
Common stock, par value $0.001; authorized shares—185,000,000; issued and outstanding shares 33,439,634 and 13,409,542 at December 31, 2006 and 2005, respectively	33	13
Additional paid-in capital	484,898	453,823
Accumulated other comprehensive income	656	467
Accumulated deficit	(460,137)	(442,560)
Total stockholders' equity	25,450	11,743
Total liabilities and stockholders' equity	$ 39,881	$ 24,436

See accompanying notes.

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(Dollars in thousands, except per share information)

	Years ended December 31,		
	2006	2005	2004
Revenues:			
Consumables	$ 12,930	$ 11,007	$ 13,162
MassARRAY and Other product related	14,121	8,063	7,864
Services	1,023	—	199
Research and other	422	351	1,224
Total revenues	28,496	19,421	22,449
Costs and expenses:			
Cost of consumable and product revenue	11,369	10,370	11,157
Cost of service revenue	518	—	204
Research and development	11,939	11,930	18,627
Selling and marketing	10,993	11,016	11,173
General and administrative	11,432	11,366	12,155
Restructuring and long-lived asset impairment charge	10	593	2,207
Amortization of acquired intangibles	1,511	2,014	3,075
Total costs and expenses	47,772	47,289	58,598
Loss from operations	(19,276)	(27,868)	(36,149)
Interest income	906	633	773
Interest expense	(20)	(325)	(434)
Other income, net	191	94	33
Loss before income tax	(18,199)	(27,466)	(35,777)
Deferred income tax benefit	622	929	1,152
Net loss	$(17,577)	$(26,537)	$(34,625)
Net loss per share, basic and diluted	$ (0.71)	$ (2.00)	$ (2.62)
Weighted average shares outstanding, basic and diluted	24,842	13,276	13,219

See accompanying notes.

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock		Additional Paid-In	Deferred	Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Compensation	Income (Loss)	Deficit	Equity
				($ in thousands)			
Balance at December 31, 2003	13,188,447	$ 13	$453,122	$ —	$ 278	$(381,398)	$ 72,015
Net loss	—	—	—	—	—	(34,625)	(34,625)
Unrealized gain on available-for-sale securities	—	—	—	—	(89)	—	(89)
Translation adjustment	—	—	—	—	532	—	532
Comprehensive loss	—	—	—	—	—	—	(34,182)
Exercise of stock options	8,791	—	42	—	—	—	42
Purchases under Employee Stock Purchase Plan	33,057	—	122	—	—	—	122
Restricted stock awards	235,667	—	617	(617)	—	—	—
Issuance of stock options to consultants	—	—	23	—	—	—	23
Amortization of restricted stock	—	—	—	52	—	—	52
Balance at December 31, 2004	13,465,962	$ 13	$453,926	$(565)	$ 721	$(416,023)	$ 38,072
Net loss	—	—	—	—	—	(26,537)	(26,537)
Unrealized gain on available-for-sale securities	—	—	—	—	93	—	93
Translation adjustment	—	—	—	—	(372)	—	(372)
Comprehensive loss	—	—	—	—	—	—	(26,816)
Other than temporary loss on investments	—	—	—	—	25	—	25
Exercise of stock options	17,469	—	16	—	—	—	16
Purchases under Employee Stock Purchase Plan	20,778	—	57	—	—	—	57
Restricted stock cancellations	(94,667)	—	(256)	256	—	—	—
Issuance of stock options and warrants to third parties	—	—	80	—	—	—	80
Amortization of restricted stock	—	—	—	309	—	—	309
Balance at December 31, 2005	13,409,542	$ 13	$453,823	$ —	$ 467	$(442,560)	$ 11,743
Net loss	—	—	—	—	—	(17,577)	(17,577)
Unrealized loss on available-for-sale securities	—	—	—	—	(1)	—	(1)
Translation adjustment	—	—	—	—	190	—	190
Comprehensive loss	—	—	—	—	—	—	(17,388)
Share-based compensation	—	—	1,169	—	—	—	1,169
Exercise of stock options	13,434	—	45	—	—	—	45
Purchases under Employee Stock Purchase Plan	16,773	—	26	—	—	—	26
Issuance of common stock and warrants, net of issuance costs	19,999,885	20	29,835	—	—	—	29,855
Balance at December 31, 2006	33,439,634	$ 33	$484,898	$ —	$ 656	$(460,137)	$ 25,450

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	Years ended December 31,		
	2006	2005	2004
Operating activities			
Net loss	$(17,577)	$(26,537)	$(34,625)
Adjustments to reconcile net loss to net cash used in operating activities:			
Stock-based compensation	1,169	12	23
Amortization of deferred compensation	—	311	52
Depreciation and amortization	3,569	5,039	8,801
Loss on disposal of fixed assets	65	185	1,891
Bad debt expense	103	—	—
Deferred taxes	(697)	(929)	(1,152)
Deferred rent	2,356	—	—
Other non-cash items	650	—	—
Changes in operating assets and liabilities:			
Accounts receivable	(2,505)	612	1,088
Inventories	1,710	1,030	5,704
Other current assets and prepaid expenses	83	(280)	673
Other assets	8	78	(76)
Accounts payable and accrued expenses	412	455	(4,689)
Deferred revenue	202	161	(1,166)
Other liabilities	(283)	657	329
Net cash used in operating activities	(10,735)	(19,206)	(23,147)
Investing activities			
Purchase of equipment, leasehold improvements, and intangible assets	(1,229)	(2,164)	(2,898)
Restricted cash	1,243	7,289	(208)
Purchases of marketable securities	(32,160)	(1,490)	(60,208)
Sales of marketable securities	10,646	9,873	67,076
Maturities of marketable securities	2,676	12,003	8,408
Net cash provided by (used in) investing activities	(18,824)	25,511	12,170
Financing activities			
Repayment of long-term debt	(200)	(7,474)	(3,572)
Payments on capital lease obligations	(193)	(402)	(493)
Proceeds from issuance of common stock and warrants, net of issuance costs	29,855	—	—
Proceeds from exercise of warrants, stock options and Employee Stock Purchase Plan purchases	71	73	164
Net cash provided by (used in) financing activities	29,533	(7,803)	(3,901)
Net decrease in cash and cash equivalents	(26)	(1,498)	(14,878)
Effect of exchange rate changes on cash and cash equivalents	73	(206)	527
Cash and cash equivalents at beginning of year	1,885	3,589	17,940
Cash and cash equivalents at end of year	$ 1,932	$ 1,885	$ 3,589
Supplemental disclosure of cash flow information:			
Interest paid	$ 20	$ 325	$ 434

See accompanying notes.

SEQUENOM, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2006

1. Nature of the Business

We are a genetics company committed to providing genetic analysis products and services that translate genomic science into superior solutions for biomedical research, agricultural, and molecular medicine applications and diagnostic applications including non-invasive prenatal diagnostics. Our proprietary MassARRAY system is a high performance DNA analysis platform that efficiently and precisely measures the amount of genetic target material and variations therein. The system is able to deliver reliable and specific data from complex biological samples and from genetic target material that is available only in trace amounts. We have used our MassARRAY technology and our extensive collections of DNA samples from diseased and healthy individuals to identify disease-related genes that predispose significant portions of the population to major diseases. Based on our discoveries, we have developed diagnostic and therapeutic content for potential partner out-licensing and commercial development opportunities.

2. Summary of Significant Accounting Policies and Significant Accounts

Reverse Stock Split

On May 31, 2006, in conjunction with our annual meeting of stockholders, our stockholders approved amendments to our certificate of incorporation to effect a reverse stock split of our common stock and to increase the number of authorized shares of common stock to 185,000,000. On June 1, 2006, we completed a 1-for-3 reverse stock split of our common stock. Accordingly, all share, warrant, option and per share information for all periods presented has been restated to account for the effect of the reverse stock split.

Basis of Consolidation

The accompanying consolidated financial statements include the accounts of Sequenom, Inc. and our wholly-owned subsidiaries located in Germany and the United Kingdom. All significant intercompany accounts and transactions are eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires us to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Accrued acquisition and integration costs

To the extent that exact amounts were not determinable at the time of acquisition, we estimated amounts for direct costs of the acquisition of Gemini Genomics and Axiom Biotechnologies and the related integration costs in accordance with EITF 95-3, "Recognition of Liabilities in Connection with a Purchase Business Combination." Amounts accrued relating to acquisition and integration costs totaled $27.4 million and as of December 31, 2006 approximately $1.0 million remained accrued. The amount accrued at December 31, 2006 represents all remaining lease payments, net of estimated income from subleased space. If we do not receive all the amounts due to us under non-cancelable subleases, we will incur additional expense.

Impairment of long-lived assets

We periodically re-evaluate the original assumptions and rationale utilized in the establishment of the carrying value and estimated lives of our long-lived assets. The criteria used for these evaluations include management's estimate of the asset's continuing ability to generate income from operations and positive cash flows in future periods as well as the strategic significance of any intangible assets in our business objectives. If assets are considered to be impaired, the impairment recognized is the amount by which the carrying value of the assets exceeds the fair value of the assets.

Asset impairment

In accordance with SFAS No. 142, which requires that goodwill and intangible assets deemed to have an indefinite useful life be reviewed for impairment annually, we recorded an impairment charge of $0.3 million in 2004 related to intangible assets acquired from Axiom, which were determined to have no alternative future use, following the closure of internal drug discovery program.

Reserves for obsolete and slow-moving inventory

We operate in an industry characterized by rapid improvements and changes to our technology and products. The introduction of new products by us or our competitors can result in our inventory being rendered obsolete or requiring us to sell items at a discount to cost. We estimate the recoverability of our inventory by reference to our internal estimates of future demands and product life cycles. If we incorrectly forecast demand for our products or inadequately manage the introduction of new product lines, we could materially impact our consolidated financial statements by having excess inventory on hand. Our future estimates are subjective and could be incorrect. During 2006, slow-moving inventory reserves of $0.7 million were offset against cost of goods sold, and we held reserves of $1.1 million at December 31, 2006.

Shipping and handling costs

Shipping and handling costs are included within cost of product and service revenue on the statement of operations.

Cash and Cash Equivalents

Cash equivalents consist of highly liquid investments with maturities at date of purchase of three months or less.

Short-term Investments

Our investment securities are classified as available-for-sale. These investments are stated at fair value with unrealized gains or losses included in comprehensive income (loss) until realized. Realized gains or losses, calculated based on the specific identification method, are recorded in other income, net, and were not material for the years ended December 31, 2006, 2005, and 2004. The amortized costs of debt securities are adjusted for amortization of premiums and accretion of discounts to maturity. The amortization and interest on securities are included in interest income.

We invest primarily in auction rate securities, commercial paper of prime quality, certificates of deposit, guaranteed bankers acceptance and U.S. Government instruments, and by policy, limit the amount of credit exposure to any one issuer. At December 31, 2006, no individual investment held had a long-term, non-temporary unrealized loss.

At December 31, 2006, short-term investments, including restricted investments, consisted of the following:

	Amortized Cost	Unrealized Gain	Unrealized (Loss)	Market Value
		($ in thousands)		
Auction rate securities	$22,996	$—	$—	$22,996
Total short-term investments	$22,996	$—	$—	$22,996

At December 31, 2006, all of our investments in auction-rate securities have contractual maturity dates past 2025. However, they provide liquidity to us every ninety days or less when interest rates reset through a "Dutch" auction process. We invest in investment grade auction-rate securities and, to date, have not participated in any failed auctions.

At December 31, 2005, short-term investments consisted of the following:

	Amortized Cost	Unrealized Gain	Unrealized (Loss)	Market Value
		($ in thousands)		
Obligations of U.S. Government Agencies	$1,998	$—	$—	$1,998
U.S. corporate debt securities	506	—	—	506
International corporate debt securities	2,065	1	—	2,066
Certificates of deposit	775	—	—	775
Total short-term investments	$5,344	$ 1	$—	$5,345

Restricted Cash

Restricted cash and investments of $1.4 million as of December 31, 2006 are held in interest bearing cash accounts with restrictions of withdrawal, in support of certain borrowing agreements and stand-by letters of credit. Restricted cash totaled $2.6 million at December 31, 2005.

Concentration of Risks

We grant credit generally on an unsecured basis to customers throughout North America, Europe, and Asia. We establish an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends, and other information. To reduce credit risk, certain sales are secured by letters of credit from commercial banks. The regional concentration of accounts receivables were as follows:

Region	December 31, 2006	Percent of receivable balance	December 31, 2005	Percent of receivable balance
	($ in thousands)			
Europe	$1,264	26%	$ 980	42%
Asia	1,230	26%	172	8%
North America	2,340	48%	1,169	50%
Total	$4,834	100%	$2,321	100%

Our Asia-based major distributors represented $4.7 million and $3.0 million, or 17% and 16% of our total product revenues during the year ended December 31, 2006 and 2005, respectively. No Asia-based distributor

had a year-end accounts receivable balance greater than 8% of the total balance outstanding at December 31, 2006. During 2006, consumables revenue for one customer in the United States represented 12% of total world-wide consumables revenue.

Our products incorporate components that are available from only one or a limited number of suppliers. Many of these components are manufactured with lead times, which can be significant. Shortages of various essential materials could occur due to interruption of supply. If we were unable to procure certain such components from suppliers or sub-contractors, it could affect our ability to meet demand for our products, which would have an adverse effect upon our results.

Inventories

Inventories are stated at the lower of cost (first-in, first-out) or market value. Standard cost, which approximates actual cost, is used to value inventories. The components of inventories were as follows:

	December 31,	
	2006	2005
	($ in thousands)	
Raw materials	$1,635	$2,410
Work in process	51	—
Finished goods	881	1,751
Total	$2,567	$4,161

Inventories are shown net of excess and obsolescence reserves of $1.1 million and $3.1 million at December 31, 2006 and 2005, respectively.

Equipment and Leasehold Improvements

Equipment is stated at cost and depreciated using the straight-line method over the estimated useful lives of the assets (generally 3 to 5 years, or the lease term, whichever is shorter). Leasehold improvements are amortized using the straight-line method over the estimated useful life of the improvement or the remaining term of the lease, whichever is shorter. The maximum estimated useful life of any leasehold improvement is 15 years from the completion of the improvement.

Equipment and leasehold improvements and related accumulated depreciation and amortization were as follows:

	December 31,	
	2006	2005
	($ in thousands)	
Laboratory equipment	$ 12,688	$ 13,128
Leasehold improvements	4,280	4,241
Office furniture and equipment	5,150	4,842
	22,118	22,211
Less accumulated depreciation and amortization	(17,590)	(16,590)
	$ 4,528	$ 5,621

Depreciation expense for the years ended December 31, 2006, 2005 and 2004 was $1.6 million, $2.6 million, and $5.1 million, respectively.

Intangible Assets

Intangible assets consisted of the following:

	Weighted Average Life	December 31, 2006 Gross Carrying Amount	December 31, 2006 Accumulated Amortization	December 31, 2005 Gross Carrying Amount	December 31, 2005 Accumulated Amortization
		($ in thousands)			
Clinical data collections	5	$13,552	$(13,552)	$13,552	$(12,078)
Purchased patent rights and licenses	5	4,449	(4,089)	4,449	(3,607)
Total		$18,001	$(17,641)	$18,001	$(15,685)

Amortization of intangible assets for the years ended December 31, 2006, 2005 and 2004 was $2.0 million, $2.4 million, and $3.7 million, respectively. Estimated aggregate amortization expense for the next five years is as follows:

Year ended December 31,	$ in millions
2007	0.3
2008	0.1
2009	—
2010	—
2011	—
	$ 0.4

In accordance with SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets", we examine our tangible and intangible assets when events or changes in circumstances indicate that the carrying value of the long-lived asset might not be recoverable. In relation to the decision to close our internal drug discovery program in July 2004, specific long-lived assets were subject to a detailed review. Based on this evaluation, we determined that long-lived assets with a carrying amount of $1.4 million were no longer recoverable and were impaired, and wrote them down to their estimated fair value of $0. Fair value was based on discounted expected future cash flows to be generated by these assets. An impairment charge of $1.4 million was accordingly recorded for these assets, of which $0.3 million was related to intangible assets. This charge is included within the statement of operations as part of the "Restructuring and long-lived asset impairment" line. These assets primarily included equipment, software, and patent rights obtained in connection with the acquisition of Axiom Pharmaceuticals, Inc. There was no SFAS No. 144 impairment charge in 2006 or 2005.

Warranty Cost and Reserves

In accordance with FIN 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others", we provide a warranty provision related to the sales of our MassARRAY equipment based on our experience of returns and repairs required under the warranty period.

We generally provide a one-year warranty on our MassARRAY Compact system and related equipment. We establish an accrual for estimated warranty expenses associated with system sales based on historical amounts. This expense is recorded as a component of cost of product revenue.

Changes in our warranty liability during the three years ended December 31, 2006 are as follows (in thousands):

Balance as of December 31, 2003	$ 265
Additions charged to cost of revenues	839
Repairs and replacements	(799)
Balance as of December 31, 2004	$ 305
Additions charged to cost of revenues	512
Repairs and replacements	(412)
Balance as of December 31, 2005	$ 405
Additions charged to cost of revenues	939
Repairs and replacements	(664)
Balance as of December 31, 2006	$ 680

Fair Value of Financial Instruments

Financial instruments, including cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities, are carried at cost, which management believes approximates fair value because of the short term maturity of these instruments.

Revenue Recognition

We follow the provisions as set forth by current accounting rules, which primarily include the Securities and Exchange Commission's Staff Accounting Bulletin, or SAB, No. 104, "Revenue Recognition." In accordance with SAB No. 104, revenues are recognized, when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed and determinable and collectibility is reasonably assured. We consider EITF 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables", and for MassARRAY system sales, the arrangement consideration is allocated among the separate units of accounting based on their relative fair values. The separate units of accounting are typically the system and software itself and maintenance contracts sold at the time of the system sale. Revenue is deferred for fees received before earned. Revenues from sales of consumables are recognized generally upon shipment and transfer of title to the customer. Revenue from sales of MassARRAY systems with standard payment terms of net 30 days are recognized upon shipment and transfer of title to the customer or when all revenue recognition criteria are met. Our contracts do not contain refund or cancellation clauses. Revenues from the sale or licensing of our proprietary software are recognized upon transfer of title to the customer or the duration of the software license. We recognize revenue on maintenance services for ongoing customer support over the maintenance period. Revenues from genetic services are recognized at the completion of key stages in the performance of the service, which is generally delivery of single nucleotide polymorphism (SNP) assay information. Grant revenue is recorded as the research expenses relating to the grants are incurred, provided that the amounts received are not refundable if the research is not successful. Amounts received that are refundable if the research is not successful would be recorded as deferred revenue and recognized as revenue upon the grantor's acceptance of the success of the research results.

Research and Development Costs

Research and development costs are expensed as incurred. These costs include personnel expenses, fees paid to collaborators, laboratory supplies, facilities, miscellaneous expenses and allocation of corporate costs. These expenses are incurred during proprietary research and development activities, as well as providing services under collaborative research agreements and grants.

Foreign Currency Translation and Transactions

The financial statements of the Company's German and United Kingdom subsidiaries are measured using, respectively, the Euro ("EUR") and Great British pound ("GBP"), as the functional currency. Assets and liabilities of these subsidiaries are translated at the rates of exchange at the balance sheet date. Income and expense items are translated at the average daily rate of exchange during the reporting period. Resulting remeasurement gains or losses are recognized as a component of other comprehensive income. Transactions denominated in currencies other than the local currency are recorded based on exchange rates at the time such transactions arise. Subsequent changes in exchange rates result in transaction gains and losses, which are reflected in income as unrealized (based on period-end translations) or realized upon settlement of the transaction. Transaction gains or losses were not material for the years ended December 31, 2006, 2005, and 2004.

Stock-Based Compensation

Effective January 1, 2006, the benefits provided under our share-based compensation plans are subject to the provisions of Statement of Financial Accounting Standards (SFAS) No. 123R (revised 2004), "Share-Based Payment." Prior to January 1, 2006, we accounted for share-based compensation related to stock options under the recognition and measurement principles of Accounting Principles Board Opinion No. 25. Therefore, we measured compensation expense for our stock options using the intrinsic value method, that is, as the excess, if any, of the fair market value of our stock at the grant date over the amount required to be paid to acquire the stock, and provided the pro forma disclosures required by SFAS 123. We elected to use the modified prospective application in adopting SFAS 123R and therefore have not restated results for prior periods. The valuation provisions of SFAS 123R apply to new awards and to awards that are outstanding on the adoption date and subsequently modified or cancelled.

As a result of the adoption of SFAS 123R, our net loss for the year ended December 31, 2006 includes $1.2 million of compensation expense related to our share-based compensation awards. The compensation expense is recorded as components of research and development expense ($0.3 million), selling and marketing expense ($0.2 million) and general and administrative expense ($0.7 million). SFAS 123R requires that cash flows resulting from tax deductions in excess of the cumulative compensation cost recognized for options exercised (excess tax benefits) be classified as cash inflows from financing activities and cash outflows from operating activities. Due to our net loss position, no tax benefits have been recognized in the consolidated statements of cash flows.

For stock options granted prior to the adoption of SFAS 123R, the following table illustrates the pro forma effect on net loss and loss per common share as if we had applied the fair value recognition provisions of SFAS 123 in determining share-based compensation for stock option awards under the plan for the years ended December 31, 2005 and 2004:

	2005	2004
	($ in thousands, except per share information)	
Net loss as reported	$(26,537)	$(34,625)
Add: Stock-based compensation expense included in reported net loss	311	52
Deduct: Stock-based employee compensation expense determined under fair value based method for all awards	(1,636)	(3,019)
Pro forma net loss	$(27,862)	$(37,592)
Net loss per share, basic and diluted, as reported	$ (2.00)	$ (2.62)
Pro forma net loss per share, basic and diluted	$ (2.10)	$ (2.84)

Options or stock awards issued to non-employees are recorded at their fair value and periodically remeasured as determined in accordance with SFAS No. 123 and EITF 96-18 "Accounting for Equity Instruments with Variable Terms that are Issued For Consideration other than Employee Services Under SFAS No. 123,"and recognized over the related service period.

Comprehensive Income (Loss)

In accordance with SFAS No. 130, "Reporting Comprehensive Income", unrealized gains or losses on our available-for-sale securities and foreign currency translation adjustments are included in other comprehensive income (loss).

Net Loss Per Share

In accordance with SFAS No. 128, "Earnings Per Share", basic net income (loss) per share is computed by dividing the net income (loss) for the period by the weighted average number of common shares outstanding during the period. Diluted net income (loss) per share is computed by dividing the net income (loss) for the period by the weighted average number of common and common equivalent shares outstanding during the period. Common equivalent shares are comprised of incremental common shares issuable upon the exercise of stock options and warrants totaling 16,215,677 and also include common shares issuable on conversion of preferred stock, and were excluded from historical diluted loss per share because of their anti-dilutive effect.

Reclassifications

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

Recent Accounting Pronouncements

In July 2006, the Financial Accounting Standards Board (FASB) issued FASB Interpretation (FIN) No. 48, "Accounting for Uncertainty in Income Taxes – an interpretation of FASB Statement No. 109," which clarifies the accounting for uncertainty in tax positions. FIN No. 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 No. 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 are currently evaluating the impact of this interpretation and do not expect the adoption of FIN No. 48 to have a material impact on our consolidated results of operations and financial position.

In September 2006, the SEC issued SAB No. 108, "Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements," which provides interpretive guidance on the consideration of the effects of prior year misstatements in quantifying current year misstatements for the purpose of a materiality assessment. SAB No. 108 is effective for fiscal years ending after November 15, 2006. We are currently evaluating the impact of this interpretation and do not expect the adoption of SAB No. 108 to have a material impact on our consolidated results of operations and financial position.

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements." SFAS No. 157 defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles and expands disclosures about fair value measurements. This Statement applies only to fair value measurements that are already required or permitted by other accounting standards. Accordingly, this Statement does not require any new fair value measurements. SFAS No. 157 is effective for fiscal years beginning after December 15, 2007. We are currently evaluating the impact, if any, the adoption of SFAS No. 157 will have on our consolidated results of operations and financial position.

3. Segment Reporting

SFAS No. 131, "Disclosures About Segments of an Enterprise and Related Information", requires the use of a management approach in identifying segments of an enterprise. We terminated our internal drug discovery efforts and closed our Pharmaceuticals business segment during the third quarter of 2004. Our out-licensing program for diagnostic and therapeutic product development and associated research activities, formerly within our Pharmaceuticals business segment, are now reported within our total expense categories. All of our activities are now operated within one business segment and accordingly we report the consolidated results of our activities without segmental disclosure.

4. Acquisition and Integration Costs

As of December 31, 2006, we had $1.0 million remaining in accrued acquisition costs, relating to the acquisition of Gemini Genomics in 2001, comprising facility exit costs. We have subleased all of our surplus space within this facility and received sub-lease income, which we set against lease expense, of $0.2 million, $0.2 million, and $0.2 million for the years ended December 31, 2006, 2005 and 2004, respectively. We charged $0.4 million to general and administrative expenses in 2004 to increase the existing accrual to cover our remaining lease payments, net of sublease income from existing subleased space. If we do not receive all the amounts due to us under non-cancelable subleases, we will incur additional lease expense.

The activity in the years ended December 31, 2006 and 2005, respectively, was as follows:

($ in millions)	Balance at December 31, 2005	Increase in accrual	Deductions	Balance at December 31, 2006
Costs to close facilities and exit lease commitments	$1.2	$—	$(0.2)	$1.0

($ in millions)	Balance at December 31, 2004	Increase in accrual	Deductions	Balance at December 31, 2005
Costs to close facilities and exit lease commitments	$1.4	$—	$(0.2)	$1.2

5. Restructuring Charge

During the third quarter of 2005, as part of our strategy to stabilize the genetic systems business, we introduced a cost reduction plan, which included a reduction in existing headcount by approximately 30 persons across all departments by the end of 2005 compared to our headcount prior to the plan. We incurred a charge of $0.8 million in 2005 relating to severance and related expenses in connection with this headcount reduction. At December 31, 2005, we had an accrued balance of $0.3 million in respect of the restructuring charges. We paid the remaining amounts due during 2006. The costs for this restructuring during the period are as follows:

($ in millions)	Balance at January 1, 2006	Costs incurred and charged to expense	Costs paid or settled	Write-offs	Balance at December 31, 2006
Termination benefits	$ 0.3	$—	$(0.3)	$—	$—

($ in millions)	Balance at January 1, 2005	Costs incurred and charged to expense	Costs paid or settled	Write-offs	Balance at December 31, 2005
Termination benefits	$—	$ 0.8	$(0.5)	$—	$ 0.3

We terminated our internal drug discovery efforts during the third quarter of 2004, which reduced our headcount by approximately 50 by the end of 2004 compared to our headcount prior to the restructuring. We will continue with our out-licensing program and seek to capitalize on the potential value of our disease gene discoveries for diagnostic and therapeutic product development. During 2004, we incurred charges of $2.2 million related to the closure of this business, and do not expect to incur any additional expenses. During the first quarter of 2005, we sold certain tangible assets and recovered $0.2 million in excess of the carrying value, which we had previously fully provided for as part of the restructuring charge.

Exit costs relating to the restructuring are shown in the income statement as "restructuring charges".

6. Long-Term Debt

We established an asset-backed loan line during 2002 that provided for borrowings up to $4.0 million, which was fully utilized by June 2003. Borrowings under the agreement bear interest at a blended rate of 9%. As of December 31, 2006 and 2005, respectively, $0 and $0.2 million was outstanding under this agreement. No further amounts are available for borrowing under this agreement.

7. Commitments and Contingencies

Building Leases

We lease facilities in the United States, Germany, China and the United Kingdom. In total, we lease space in six buildings under leases that expire at various dates through September 2015. Total rent expense under these leases was approximately $5.0 million, $4.3 million, and $4.2 million in 2006, 2005, and 2004, respectively.

In September 2005, we entered into an amendment to our lease for our corporate headquarters in San Diego. The lease amendment provides for the deferral of approximately $3.2 million of the monthly rent payments by reducing the monthly payments during the period commencing October 1, 2005 and ending September 30, 2007 and increasing the aggregate monthly payments by the deferred amount for the remaining term of the lease, from October 1, 2007 to September 30, 2012. The total obligation under the lease remains unchanged. Rent expense is calculated on a straight-line basis. In connection with the lease amendment, we issued our landlord a warrant to purchase 50,000 shares of our common stock with an exercise price of $2.64 per share. The warrants are exercisable and have a ten year term. The fair value of the warrants, calculated using the Black-Scholes model, was recorded as prepaid rent and is being amortized as rent expense over the remaining life of the lease.

The following is a schedule of future minimum lease payments at December 31, 2006:

Year Ending December 31,	Operating Leases ($ in thousands)
2007	3,905
2008	5,892
2009	5,966
2010	5,927
2011	5,347
Thereafter	17,356
	$44,393

The above operating leases expire at various dates through 2015. Certain leases contain extension, return, or renewal provisions for two years at existing lease rates and/or purchase options. Future operating lease commitments for leases have not been reduced by future minimum sublease rentals aggregating $1.1 million.

Capital Equipment Leases

During 2000, we entered into a master equipment lease agreement providing for borrowings up to $8.0 million. Under the agreement, the lessor purchased the equipment that we leased subject to quarterly payments for 14 quarters. During 2006, we paid the remaining balance owed under the lease agreement. No further amounts are available for borrowing under this agreement.

Letters of Credit

At December 31, 2006, we had outstanding stand-by letters of credit with financial institutions totaling $1.2 million related to our building and operating leases. Letters of credit amounting to $0.1 million will not be drawn down unless we default upon our obligations under the respective agreements. An operating lease letter of $1.1 million will remain in place until the expiry of the Newton, Massachusetts building lease agreement in December 2010.

Collaboration, Development, and Licensing Agreements

In October 2005, we acquired exclusive rights in certain countries, including the United States, United Kingdom and other countries in Europe and elsewhere, to non-invasive prenatal diagnostic intellectual property from Isis Innovation Ltd., the technology transfer company of the University of Oxford. The intellectual property covers non-invasive prenatal genetic diagnostic testing on fetal nucleic acids derived from plasma or serum on any platform including mass spectrometry and real time polymerase chain reaction amplification platforms. Under the terms of the agreement, we paid an up-front fee of $0.5 million, which was expensed in 2005, and are required to pay milestone payments and royalties on product sales.

We have entered into various license agreements since 1996 allowing us to utilize certain patents rights. If these patents are used in connection with a commercial product sale, we will pay royalties based on a percentage of the related product revenues. During the years ended December 31, 2006, 2005, and 2004, the amount of royalties incurred in connection primarily with product sales was $0.1 million, $0.2 million, and $0.0 million, respectively.

Litigation

In November 2001, we and certain of our current or former officers and directors were named as defendants in a class action shareholder complaint filed by Collegeware USA in the U.S. District Court for the Southern District of New York (now captioned In re Sequenom, Inc. IPO Securities Litigation) Case No. 01-CV-10831. Similar complaints were filed in the same District Court against hundreds of other public companies that conducted initial public offerings of their common stock in the late 1990s and 2000. In the complaint, the plaintiffs allege that our underwriters, certain of our officers and directors and we violated the federal securities laws because our registration statement and prospectus contained untrue statements of material fact or omitted material facts regarding the compensation to be received by and the stock allocation practices of the underwriters. The plaintiffs seek unspecified monetary damages and other relief. In October 2002, our officers and directors were dismissed without prejudice pursuant to a stipulated dismissal and tolling agreement with the plaintiffs. In February 2003, the District Court dismissed the claim against us brought under Section 10(b) of the Securities Exchange Act of 1934, without giving the plaintiffs leave to amend the complaint with respect to that claim. The court declined to dismiss the claim against us brought under Section 11 of the Securities Act of 1933.

In June 2003, pursuant to the authorization of a special litigation committee of our Board of Directors, we approved in principle a settlement offer by the plaintiffs. In June 2004, we entered into a settlement agreement with the plaintiffs. In February 2005, the District Court issued a decision certifying a class action for settlement purposes and granting preliminary approval of the settlement subject to modification of certain bar orders contemplated by the settlement. In August 2005, the District Court reaffirmed class certification and preliminary approval of the modified settlement. In February 2006, the District Court dismissed litigation filed against certain underwriters in connection with the claims to be assigned to the plaintiffs under the settlement. In April 2006, the District Court held a final fairness hearing to determine whether to grant final approval of the settlement. In December 2006, the U.S. Court of Appeals for the Second Circuit vacated the District Court's decision certifying as class actions the six lawsuits designated as "focus cases." The Circuit Court has ordered a stay of all proceedings in all of the lawsuits pending the outcome of plaintiffs' petition to the Second Circuit for rehearing *en banc*. Accordingly, the District Court's decision on final approval of the settlement remains pending. We do not anticipate that the ultimate outcome of this event will have a material adverse impact on our financial position.

In addition, from time to time, we may be involved in litigation relating to claims arising out of our operations in the normal course of business.

8. Related Party Transactions

We had the following transactions with parties related to certain of our Board members:

- Boston University. Dr. Charles Cantor is our Chief Scientific Officer, a member of our Board and was previously the chair and professor of the department of biomedical engineering and biophysics, and Director of the Center for Advanced Biotechnology at Boston University. We have agreements with Boston University in which Dr. Cantor participates under which we paid $0.4 million, $0.3 million, and $0.3 million, and we recorded product revenue for MassARRAY hardware and consumables, totaling $0.1 million, $0.1 million, and $0.2 million, in the years ended December 31, 2006, 2005 and 2004, respectively. We also have loaned Boston University a MassARRAY system for use in their research programs.
- University of California, San Diego. Dr. Cantor is adjunct professor in the department of bioengineering at the University of California, San Diego, or UCSD. We recorded product revenue for MassARRAY hardware and consumables, totaling $42,000 and $0.1 million in the years ended December 31, 2006 and 2005, respectively.

At December 31, 2006, we had the following receivable and payable balances with the above related parties ($ in thousands):

Related party	Receivables	Payables
Boston University	$22	$ 75
UCSD	4	—
Total	$26	$ 75

At December 31, 2005, we had the following receivable and payable balances with the above related parties (in $ thousands):

Related party	Receivables	Payables
Boston University	$18	$1
UCSD	9	1
Total	$27	$2

9. Stockholders' Equity

In June 2006, we closed a private placement financing that provided us with approximately $30.0 million of net proceeds from the sale of 19,999,998 shares of common stock and seven year warrants to purchase up to an additional 11,999,999 shares of common stock, subject to certain adjustment provisions. In conjunction with the private placement financing and our annual meeting of stockholders, our stockholders approved amendments to our certificate of incorporation to effect a reverse stock split and increase the number of authorized shares of common stock to 185,000,000. On June 1, 2006, we completed a 1-for-3 reverse stock split of our common stock. Accordingly, all share, warrant, option and per share information for all periods presented has been restated to account for the effect of the reverse stock split.

Stock Compensation Plans

On May 31, 2006, the stockholders approved our 2006 equity incentive plan, or 2006 plan, as the successor to our 1999 stock option plan, or 1999 plan. In connection with the adoption of the 2006 plan, we terminated the automatic annual increase feature under the 1999 plan and resolved to cease to grant additional stock awards under the 1999 plan following the effectiveness of the 2006 plan. The aggregate number of shares of common stock that may be issued under the 2006 plan is 7,264,482, plus the number of shares subject to any stock awards under the 1999 plan that terminate or are forfeited or repurchased and would otherwise have been returned to the share reserve under the 1999 plan.

Stock Options

The exercise price of all stock options granted during the years ended December 31, 2006, 2005 and 2004 was equal to the market value on the date of grant and, accordingly, no share-based compensation expense for such options is reflected in operating results for the years ended December 31, 2005 and 2004. The estimated fair value of each stock option award granted was determined on the date of grant using the Black-Scholes option valuation model with the following weighted-average assumptions for stock option grants during the years ended December 31, 2006, 2005 and 2004:

	2006	2005	2004
Risk free interest rates	4.95%	4%	4%
Volatility	101%	93%	72%
Dividend yield	0%	0%	0%
Expected option term (years)	6.7	6.0	6.0
Weighted average fair value of stock option grants	$1.65	$2.73	$5.04

The risk-free interest rate assumption is based upon observed interest rates appropriate for the expected term of our employee stock options. The expected volatility is based on the historical volatility of our stock. We have not paid any dividends on common stock since our inception and do not anticipate paying dividends on its common stock in the foreseeable future. The computation of the expected option term is based on a weighted-average calculation combining the average life of stock options that have already been exercised or cancelled with the estimated life of all unexercised stock options.

SFAS 123R requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Pre-vesting forfeitures were estimated to be 12.65% based on historical experience. In our pro forma information required under SFAS 123 for the periods prior to fiscal 2006, we accounted for forfeitures as they occurred. Our determination of fair value is affected by our stock price as well as a number of assumptions that require judgment.

A summary of the status of our stock option plans as of December 31, 2006 and of changes in stock options outstanding under the plans during the years ended December 31, 2006, 2005 and 2004 is as follows:

Outstanding	Shares Subject to Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at December 31, 2003	1,817,633	$17.82		
Granted	281,500	6.78		
Canceled	(378,645)	15.69		
Exercised	(8,791)	4.83		
Outstanding at December 31, 2004	1,711,697	$16.17		
Granted	542,334	3.21		
Canceled	(407,320)	11.07		
Exercised	(17,469)	0.90		
Outstanding at December 31, 2005	1,829,242	$13.21		
Granted	2,159,660	1.95		
Canceled	(689,685)	10.43		
Exercised	(13,434)	3.37		
Outstanding at December 31, 2006	3,285,783	$ 6.45	8.2	$6,539,265
Options vested and exercisable at December 31, 2006	1,051,289	$15.46	6.3	$ 909,071

The total intrinsic value of options exercised during the year ended December 31, 2006 was approximately $28,000.

As of December 31, 2006, there was $2.6 million of unamortized compensation cost related to unvested stock option awards, which is expected to be recognized over a remaining weighted-average vesting period of 2.48 years. Cash received from stock option exercises for the years ended December 31, 2006 and 2005 was $45,000 and $16,000, respectively.

At December 31, 2006, 3,978,699 shares were available for future option grants and 7,264,482 shares of common stock were reserved for issuance upon exercise of options.

Restricted Stock Awards and Deferred Compensation

During the year ended December 31, 2004, we issued 245,500 shares of restricted stock awards with a weighted average grant date fair value of $2.61 per share to certain executive officers and employees. The awards vested one year from the grant date. The deferred compensation for these restricted stock awards was based on the number of shares granted multiplied by the fair market value of the stock on the date of grant and then amortized as share-based compensation expense over the vesting period of the restricted stock. During the year ended December 31, 2005, we recognized approximately $0.3 million of amortization expense upon vesting of the awards.

Pursuant to Internal Revenue Code Sections 382 and 383, use of our federal net operating loss and credit carryforwards may be limited due to a cumulative change in ownership of more than 50% within a three-year period.

Use of our U.K. net operating loss carryforwards may be limited upon the occurrence of certain events such as the discontinuation or change in the nature or conduct of the business.

We are subject to ongoing audits from various taxing authorities in the jurisdictions in which we do business. We believe we have adequately provided for uncertain tax issues not yet resolved with federal, state and foreign tax authorities. Although not probable, the most adverse resolution of these issues could result in additional charges to earnings in future periods. Based upon a consideration of all relevant facts and circumstances, we do not believe the ultimate resolution of uncertain tax issues for all open tax periods will have a materially adverse effect upon our results of operations or financial condition.

11. Savings and Pension Plans

We have a 401(k) savings plan covering most United States employees. In the United Kingdom we make contributions to defined contribution pension plans. Under these plans, individual employees may make contributions to the plan, which can be matched by us in an amount determined by the Board of Directors or as determined by local statutes. We made no matching contributions in 2006. We made matching contributions totaling approximately $0.2 million in both 2005 and 2004.

A summary of the status of our stock option plans as of December 31, 2006 and of changes in stock options outstanding under the plans during the years ended December 31, 2006, 2005 and 2004 is as follows:

Outstanding	Shares Subject to Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
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Granted	2,159,660	1.95		
Canceled	(689,685)	10.43		
Exercised	(13,434)	3.37		
Outstanding at December 31, 2006	3,285,783	$ 6.45	8.2	$6,539,265
Options vested and exercisable at December 31, 2006	1,051,289	$15.46	6.3	$ 909,071

The total intrinsic value of options exercised during the year ended December 31, 2006 was approximately $28,000.

As of December 31, 2006, there was $2.6 million of unamortized compensation cost related to unvested stock option awards, which is expected to be recognized over a remaining weighted-average vesting period of 2.48 years. Cash received from stock option exercises for the years ended December 31, 2006 and 2005 was $45,000 and $16,000, respectively.

At December 31, 2006, 3,978,699 shares were available for future option grants and 7,264,482 shares of common stock were reserved for issuance upon exercise of options.

Restricted Stock Awards and Deferred Compensation

During the year ended December 31, 2004, we issued 245,500 shares of restricted stock awards with a weighted average grant date fair value of $2.61 per share to certain executive officers and employees. The awards vested one year from the grant date. The deferred compensation for these restricted stock awards was based on the number of shares granted multiplied by the fair market value of the stock on the date of grant and then amortized as share-based compensation expense over the vesting period of the restricted stock. During the year ended December 31, 2005, we recognized approximately $0.3 million of amortization expense upon vesting of the awards.

Employee Stock Purchase Plan

In 1999, we adopted the 1999 Employee Stock Purchase Plan, or 1999 ESPP. As of December 31, 2006, we had reserved 662,596 shares of common stock for issuance under the 1999 ESPP. Beginning in 2001, the amount of authorized shares available under the 1999 ESPP automatically increases each January 1st by an amount equal to 1% of the outstanding common stock on the last trading day of the prior year, subject to an annual increase limitation of 166,666 shares. The 1999 ESPP will have a series of concurrent offering periods, each with a maximum duration of 24 months. Shares are purchased semi-annually at 85% of the lower of the beginning or end of the period price. As of December 31, 2006, employees have contributed approximately $24,000 to the current offering period of the 1999 ESPP, and we did not recognized any share-based compensation expense related to the purchase that occurred on January 31, 2007.

Warrants

In connection with the acquisition of Axiom Biotechnologies in 2002, the outstanding warrant to purchase 7,333 Axiom ordinary shares at an exercise price of $10.50 was adjusted to be exercisable for 1,535 shares of our common stock at an exercise price of $50.19 per share. This warrant has not been exercised and expires in December 2011.

In connection with the Series C Preferred Stock issued in May 1997, we issued warrants to purchase an aggregate of 106,508 shares of our Series C Preferred Stock at an exercise price of $3.15 per share. These warrants became exercisable for 35,503 shares of our common stock at an exercise price of $9.45 per share upon our initial public offering. These warrants expire in May 2007. As of December 31, 2006, 11,694 of these warrants remain outstanding.

In connection with an amendment to our lease for our corporate headquarters in San Diego, California in September 2005, we issued the landlord a warrant to purchase 50,000 shares of our common stock with an exercise price of $2.64 per share. The warrant expires in October 2015. As of December 31, 2006, all of the warrants are exercisable and remain outstanding.

In connection with the private placement financing completed in June 2006, we issued to the investors warrants to purchase an aggregate of 11,999,999 shares of our common stock at an exercise price of $2.10 per share. These warrants expire in June 2013. Additionally, we issued to our placement agent in conjunction with the private placement financing a warrant to purchase an aggregate of 866,666 shares of our common stock at an exercise price of $2.52 per share. This warrant expires in June 2011. As of December 31, 2006, all of the warrants issued in conjunction with the private placement financing are exercisable and remain outstanding.

10. Income Taxes

The reconciliation of income tax computed at the Federal statutory tax rate to the benefit for income taxes is as follows:

	December 31,		
	2006	2005	2004
	($ in thousands)		
Tax at statutory rate	$(6,370)	$(9,558)	$(12,522)
State taxes, net of federal benefit	(1,010)	(1,516)	(2,089)
Change in valuation allowance	6,950	8,175	15,970
Credits and Other	(192)	1,970	(2,511)
	$ (622)	$ (929)	$ (1,152)

The 2006, 2005, and 2004 income tax benefit of $0.6 million, $0.9 million, and $1.2 million is comprised of foreign deferred taxes.

Deferred income taxes reflect the net effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets and liabilities are shown below. A full valuation allowance has been recorded, as realization of such assets is uncertain.

	December 31,	
	2006	2005
	($ in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 102,131	$ 98,878
Research and development credits	12,513	11,964
Capitalized research expenses	10,785	8,184
Capital loss carryforward	1,003	1,003
Other, net	5,181	4,634
Total deferred tax assets	131,613	124,663
Deferred tax liabilities:		
Intangible Assets	—	(697)
Valuation allowance	(131,613)	(124,663)
Net deferred tax assets (liabilities)	$ —	$ (697)

At December 31, 2006, we have federal and state tax net operating loss carryforwards of approximately $229.2 million and $130.0 million, respectively. The difference between the federal and state tax loss carryforwards is attributable to the capitalization of research and development expenses for state tax purposes and the limitation on the California loss carryforwards. The federal tax loss carryforwards will begin to expire in 2008, unless previously utilized. Approximately $22.9 million of the state tax loss carryforwards will expire in 2007 and the remaining state tax loss carry-forwards will continue to expire in 2008 unless previously utilized.

We incurred a federal and state capital loss on the disposal of two of our foreign subsidiaries in 2002 totaling $2.5 million. The capital loss carryforward will expire in 2007.

We also have German and United Kingdom (U.K.) net operating loss carryforwards of approximately $9.5 million and $35.6 million, respectively, which may be carried forward indefinitely.

Approximately $32.0 million of the U.K. net operating loss carry-forwards was acquired with the purchase of Gemini Genomics and is fully reserved by the valuation allowance. To the extent these U.K. net operating loss carryforwards are utilized, such benefit will be recorded as a purchase accounting adjustment.

The deferred tax asset includes a future tax benefit of approximately $0.6 million related to stock option deductions, which, if recognized, will be allocated to additional paid in capital.

We also have federal and state research and development tax credit carryforwards of approximately $7.9 million and $7.1 million, respectively. The federal research and development tax credit carryforwards will begin to expire in 2011 unless previously utilized.

Pursuant to Internal Revenue Code Sections 382 and 383, use of our federal net operating loss and credit carryforwards may be limited due to a cumulative change in ownership of more than 50% within a three-year period.

Use of our U.K. net operating loss carryforwards may be limited upon the occurrence of certain events such as the discontinuation or change in the nature or conduct of the business.

We are subject to ongoing audits from various taxing authorities in the jurisdictions in which we do business. We believe we have adequately provided for uncertain tax issues not yet resolved with federal, state and foreign tax authorities. Although not probable, the most adverse resolution of these issues could result in additional charges to earnings in future periods. Based upon a consideration of all relevant facts and circumstances, we do not believe the ultimate resolution of uncertain tax issues for all open tax periods will have a materially adverse effect upon our results of operations or financial condition.

11. Savings and Pension Plans

We have a 401(k) savings plan covering most United States employees. In the United Kingdom we make contributions to defined contribution pension plans. Under these plans, individual employees may make contributions to the plan, which can be matched by us in an amount determined by the Board of Directors or as determined by local statutes. We made no matching contributions in 2006. We made matching contributions totaling approximately $0.2 million in both 2005 and 2004.

12. Geographic Information

We have wholly-owned subsidiaries located in Germany and the United Kingdom and have customer and vendor relationships worldwide. The following table presents information about us by geographic area. There were no material amounts of transfers between geographic areas. Included in the consolidated balance sheets and consolidated statements of operations are the following domestic and foreign components at December 31, 2006 2005, and 2004:

	December 31,		
	2006	2005	2004
Current assets:			
United States	$ 29,953	$ 12,803	$ 37,386
Europe	3,225	2,859	3,500
Asia	1,230	172	622
	$ 34,408	$ 15,834	$ 41,508
Property, equipment and leasehold improvements, net:			
United States	$ 4,149	$ 5,079	$ 5,581
Europe	374	534	866
Asia	5	8	275
	$ 4,528	$ 5,621	$ 6,722
Other assets:			
United States	$ 945	$ 2,917	$ 10,256
Europe	—	64	—
	$ 945	$ 2,981	$ 10,256
Total assets:			
United States	$ 35,047	$ 20,799	$ 53,223
Europe	3,599	3,457	4,366
Asia	1,235	180	897
	$ 39,881	$ 24,436	$ 58,486
Revenues:			
United States	$ 15,947	$ 10,205	$ 10,772
Europe	7,829	6,201	5,027
Asia	4,720	3,015	6,650
	$ 28,496	$ 19,421	$ 22,449
Net income (loss):			
United States	$(13,035)	$(18,497)	$(23,881)
Europe	661	(3,777)	(4,875)
Asia	(5,203)	(4,263)	(5,869)
	$(17,577)	$(26,537)	$(34,625)

13. Selected Quarterly Financial Data (unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
	(Dollars in thousands, except per share information)				
2006					
Net sales	$ 6,911	$ 7,188	$ 6,510	$ 7,887	$ 28,496
Gross profit	4,191	4,160	3,578	4,679	16,609
Net loss	(3,720)	(3,885)	(4,641)	(5,332)	(17,577)
Net loss per share, basic and fully diluted	$ (0.27)	$ (0.21)	$ (0.14)	$ (0.16)	$ (0.71)
Shares used in calculated per share amounts, historical, basic and fully diluted	13,414	18,851	33,423	33,431	24,842
2005					
Net sales	$ 4,281	$ 6,175	$ 4,567	$ 4,398	$ 19,421
Gross profit	1,665	3,018	2,535	1,833	9,051
Net loss	(7,382)	(6,064)	(6,038)	(7,053)	(26,537)
Net loss per share, basic and fully diluted	$ (0.56)	$ (0.46)	$ (0.46)	$ (0.53)	$ (2.00)
Shares used in calculated per share amounts, historical, basic and fully diluted	13,248	13,257	13,269	13,330	13,276

Schedule II—SEQUENOM, INC.

Valuation and Qualifying Accounts
($ in thousands)

Description	Balance at Beginning of Period	Charged to Costs and Expenses	Deductions	Balance at End of Period
Year ended December 31, 2006:				
Allowance for doubtful accounts	$ 25	$ 96	$ 4	$ 117
Reserve for obsolete or excess inventory	3,142	(696)	1,364	1,082
Year ended December 31, 2005:				
Allowance for doubtful accounts	$ 96	$ (144)	$ (73)[3]	$ 25
Reserve for obsolete or excess inventory	3,193	707	758[2]	3,142
Year ended December 31, 2004:				
Allowance for doubtful accounts	$ 448	$ (208)	$ 144[1]	$ 96
Reserve for obsolete or excess inventory	1,890	3,083	1,780[2]	3,193

(1) Write off of uncollectible accounts
(2) Write off of obsolete or excess inventory
(3) Includes $75,000 collection deducted in 2004

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

FORM 10-K/A

(Amendment No. 1)

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

(Mark One)

☒ **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: 000-29101

SEQUENOM, INC.

(Exact name of Registrant as specified in its charter)

DELAWARE	**77-0365889**
(State or other jurisdiction or incorporation or organization)	**(I.R.S. Employer Identification No.)**
3595 John Hopkins Court San Diego, California	**92121**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (858) 202-9000

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

Common Stock, $.001 par value

(Title of class)

The Nasdaq Stock Market, LLC

(Name of Each Exchange on Which Registered)

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 ☒

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 ☒

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 ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein in this Amendment No. 1 on Form 10-K/A. ☒

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 ☐ Non-accelerated filer ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

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 as reported on the Nasdaq Global Market, was approximately $27.0 million. Shares of Common Stock held by each executive officer and director and by each person who owns 10% or more of the outstanding Common Stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 30, 2007, there were 33,449,683 shares of the registrant's Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None.

EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A (this "Amendment") amends the Annual Report on Form 10-K of Sequenom, Inc. for the fiscal year ended December 31, 2006, originally filed with the Securities and Exchange Commission on March 30, 2007 (the "Original Filing"). We are filing this Amendment to amend Part III of the Original Filing to include the information required by and not included in Part III of the Original Filing because we do not intend to file our definitive proxy statement within 120 days of the end of our fiscal year ended December 31, 2006. In connection with the filing of this Amendment and pursuant to the rules of the Securities and Exchange Commission, we are including with this Amendment new certifications by our principal executive and principal financial officers. Accordingly, Item 15 of Part IV has also been amended to reflect the filing of these new certifications.

Except as described above, no other changes have been made to the Original Filing. The Original Filing continues to speak as of the date of the Original Filing, and we have not updated the disclosures contained therein to reflect any events which occurred at a date subsequent to the filing of the Original Filing other than as expressly indicated in this Amendment. In this Amendment, unless the context indicates otherwise, the terms "Company," "we," "us," and "our" refer to Sequenom, Inc. and its subsidiaries. Other defined terms used in this Amendment but not defined herein shall have the meaning specified for such terms in the Original Filing.

All statements in this Amendment that are not historical are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements can generally be identified as such because the context of the statement will include words such as "may," "will," "intend," "plans," "believes," "anticipates," "expects," "estimates," "predicts," "potential," "continue," "opportunity," "goals," or "should," the negative of these words or words of similar import. Similarly, statements that describe our future plans, strategies, intentions, expectations, objectives, goals or prospects are also forward-looking statements. These forward-looking statements are or will be, as applicable, based largely on our expectations and projections about future events and future trends affecting our business, and so are or will be, as applicable, subject to risks and uncertainties including but not limited to the risk factors discussed in the Original Filing, that could cause actual results to differ materially from those anticipated in the forward-looking statements. We caution investors that there can be no assurance that actual results or business conditions will not differ materially from those projected or suggested in such forward-looking statements. Our views and the events, conditions and circumstances on which these future forward-looking statements are based, may change.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Executive Officers

Information regarding our executive officers is set forth in Item 1 of Part I of the Original Filing.

Directors

Ernst-Günter Afting, Ph.D., M.D.

Dr. Afting, 64, has served as a director since 1996. From 1995 until his retirement in 2006, Dr. Afting served as President and Chief Executive Officer of the National Research Center for Environment and Health, GSF-Forschungszentrom für Umwelt und Gesundheit GmbH, in Munich, one of the biggest governmental research centers in Germany. From 1993 to 1995, he served as President and Chief Executive Officer of Roussel UCLAF, Paris. He was also a member of the board of the Pharmaceutical Division of Hoechst Group from 1984 to 1993 and was Chairman and Chief Executive Officer of the Divisional Pharmaceutical Board of Hoechst from 1992-1993. Dr. Afting was a member of the advisory committee on Science and Technology to German Chancellor Helmut Kohl from 1996 to 1997 and from 1996 to 2005 has been a member of the German National Advisory Committee on Health Research to the State Secretaries of Science, Technology and Health. Dr. Afting has been a member of the medical faculty at the University of Goettingen since 1985. Dr. Afting currently serves on the boards of Intercell AG, Vienna, Enanta Pharmaceuticals, Inc., and Olympus Europa GmbH, Hamburg. He received his Ph.D. in Chemistry and M.D. from the University of Freiburg/Breisgau, Germany.

Charles R. Cantor, Ph.D.

Dr. Cantor, 64, joined us as Chief Scientific Officer and Chairman of the Scientific Advisory Board in August 1998. Since 1992 Dr. Cantor has served as a professor in the Department of Biomedical Engineering and Co-Director of the Center for Advanced Biotechnology at Boston University. Prior to that time, Dr. Cantor held positions at Columbia University and the University of California, Berkeley. He was also Director of the Human Genome Center of the Department of Energy at Lawrence Berkeley Laboratory. Dr. Cantor published the first textbook on genomics, *The Science and Technology of the Human Genome Project*, and remains active in the Human Genome Project through his membership in a number of the project's advisory committees and review boards. Dr. Cantor is a member of the National Academy of Sciences. He is also a scientific advisor to 12 biotech and life science companies and one venture capital firm. Dr. Cantor currently serves as a director of ExSAR, Inc., Human BioMolecular Research Institute, and Retrotrope, Inc. Dr. Cantor received his Ph.D. in Chemistry from the University of California, Berkeley.

Patrick G. Enright

Mr. Enright, 45, has served as a director since June 2006. Mr. Enright is a founder and Managing Director of Longitude Capital, a life sciences venture capital firm specializing in medical devices and biotechnology. From 2002 through 2006, Mr. Enright was a Managing Director of Pequot Ventures, the direct venture investment arm of Pequot Capital Management, Inc., and has been a member of various general partnerships of Pequot's venture capital and private equity funds since June 2002. Mr. Enright is currently a consultant for Pequot Capital Management, Inc. From 1998 to 2001, Mr. Enright was a Managing Member of Diaz & Atschul Group, LLC, a principal investment group. From 1995 to 1998, he served in various executive positions at Valentis, Inc., a biotechnology company engaged in the development of products for peripheral arterial disease, including as Senior Vice President, Corporate Development, and Chief Financial Officer. From 1993 to 1994, he was Senior Vice President of Finance and Business Development for Boehringer Mannheim Therapeutics, a pharmaceutical company and a subsidiary of Corange Ltd. From 1989 to 1993, Mr. Enright was employed at PaineWebber Incorporated, an investment banking firm, where he became a Vice President in 1992. Mr. Enright

currently serves on the boards of Threshold Pharmaceuticals, Inc., DiObex, Codexis, Horizon Therapeutics, MAP Pharmaceuticals, Prestwick Pharmaceuticals, Raven biotechnologies and InfaCare Pharmaceuticals. Mr. Enright earned a B.S. in Biological Sciences from Stanford University and a M.B.A. from the Wharton School of Business at the University of Pennsylvania.

Harry F. Hixson, Jr., Ph.D.

Dr. Hixson, 68, has served as Chairman of our Board of Directors since January 2003. Dr. Hixson has also served as a director of Arena Pharmaceuticals, Inc. since 2004, and currently serves as the Chairman of the Board of BrainCells, Inc., a privately held biopharmaceutical company focused on central nervous system drug development. He has served as Chairman of BrainCells since December 2003. Dr. Hixson serves as a member of the Board of Directors of Infinity Pharmaceuticals, Inc., a cancer drug discovery and development company. Dr. Hixson previously served as the Chairman of the Board of Directors of Discovery Partners International, Inc. prior to its merger with Infinity Pharmaceuticals. Dr. Hixson served as Chief Executive Officer of BrainCells from July 2004 until September 2005. Dr. Hixson served as Chief Executive Officer of Elitra Pharmaceuticals, Inc., a privately held biopharmaceutical company focused on anti-infective drug development, from February 1998 until May 2003. He served as Amgen's President and Chief Operating Officer and as a member of its Board of Directors from 1988 to 1991. Prior to Amgen, Dr. Hixson held various management positions with Abbott Laboratories, including Vice President, Diagnostic Products Business Group, and Vice President, Research and Development, in the Diagnostics Division. He has been involved with the start-up of several biopharmaceutical companies, including Neurocrine Biosciences and Signal Pharmaceuticals, now part of Celgene. Dr. Hixson received his Ph.D. in Physical Biochemistry from Purdue University and an M.B.A. from the University of Chicago. He also received an Honorary Doctor of Science degree from Purdue University.

Larry E. Lenig, Jr.

Mr. Lenig, 58, has served as a director since June 2006. Mr. Lenig currently serves as Senior Partner of ComVest Investment Partners, a private equity capital fund group, and as the portfolio manager of ComVest Capital LLC, an affiliated fund initiated by ComVest Investment Partners in 2006. Mr. Lenig joined ComVest Investment Partners in August 2004. From 1994 to 2004, Mr. Lenig acted as a consultant and advisor to a number of public and private businesses in a diverse range of industries, including oil and gas, software and related services, metal products manufacturers and restaurant chains. During that period, Mr. Lenig also served as Chief Executive Officer and directed turnarounds at two public companies, Grant Geophysical, Inc., an international geophysical services provider, and Seitel, Inc., which owns and offers for license one of the world's largest U.S. and Canadian focused 3D and 2D seismic data libraries, and consulted to other private companies during reorganizations and restructuring of those enterprises. Prior to entering private consulting, Mr. Lenig spent 19 years with and served as Chief Operating Officer, President and a director of Digicon Inc. (now called Veritas DGC, Inc., a New York Stock Exchange-listed integrated oil service company specializing in onshore and offshore geophysical data acquisition, advanced data processing and the ownership of data libraries), following an initial career as a commercial lender for a Houston banking institution. Mr. Lenig served as a director of Fischer Imaging Corporation, a public company engaged in mammography, radiology and associated healthcare device manufacturing prior to the sale of its principal intellectual property positions in late 2005. Mr. Lenig currently serves as a director and chairman of the audit committee of Deep Marine Technology, Inc., a privately held oil and gas services company. Mr. Lenig received a B.B.A. in Accounting from the University of Houston and is currently a member of the University's Advisory Counsel to the Dean of the College of Natural Sciences and Mathematics.

Ronald M. Lindsay, Ph.D.

Dr. Lindsay, 59, has been a director since May 2003. He currently operates Milestone Consulting, a biopharmaceutical consulting enterprise. He served as Vice President, Research and Development, and Chief Science Officer of diaDexus Inc., a privately held biotechnology company, from 2000 to January 2004. From

1997 through 2000, Dr. Lindsay served in various roles with Millennium Pharmaceuticals, Inc., a publicly traded biopharmaceutical company, including Senior Vice President, Biotherapeutics and Vice President, Preclinical Research and Development, of its subsidiary Millennium Biotherapeutics Inc. From 1989 to 1997, Dr. Lindsay served in various roles with Regeneron Pharmaceuticals Inc., of which he was a founding scientist, holding the position of Vice President, Neurobiology. He is a director of Arqule Inc., HistoRx Inc., and Neuro3D, a member of the scientific advisory board of Serono S.A. and a Senior Advisor to TVM Capital, Munich. Dr. Lindsay is the author of more than 150 scientific publications and holder of multiple patents. Dr. Lindsay received his Ph.D. in Biochemistry from the University of Calgary.

Harry Stylli, Ph.D.

Dr. Stylli, 45, joined us in June 2005 as President and Chief Executive Officer and a director. From November 2004 to February 2005, Dr. Stylli served as President and Chief Executive Officer of Xencor, Inc., a privately held, next-generation antibody platform company. From May 2002 to July 2003, Dr. Stylli served as President and Chief Executive Officer for CovX Pharmaceuticals, a biopharmaceutical company of which Dr. Stylli was a co-founder. From 1995 to 2001, Dr. Stylli served in various capacities, including Senior Vice President of Screening Technology and New Ventures, Senior Vice President of Commercial Development and most recently President, for Aurora Biosciences Corporation, a drug discovery systems company of which Dr. Stylli was a co-founder. Dr. Stylli currently serves as a director of Molecular Insight Pharmaceuticals, Inc., a publicly held biotechnology company, and is an advisor to Nanosyn, a privately held medicinal chemistry company. Dr. Stylli received his Ph.D. from London University's Faculty of Medicine and an M.B.A. from the United Kingdom's Open University.

Stockholder Recommendations for Nominees to the Board of Directors

The Nominating and Corporate Governance Committee will consider director candidates recommended by stockholders. The Committee does not intend to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether the candidate was recommended by a stockholder. Stockholders who wish to recommend individuals for consideration by the Nominating and Corporate Governance Committee to become nominees for election to the Board of Directors may do so by delivering a written recommendation to the Nominating and Corporate Governance Committee at the following address: Sequenom, Inc., 3595 John Hopkins Court, San Diego, California 92121. Such recommendations must be received by the Nominating and Corporate Governance Committee at least 120 days prior to the anniversary date of the mailing of our proxy statement for the last annual meeting of stockholders. Submissions must include the full name of the proposed nominee, a description of the proposed nominee's business experience for at least the previous five years, complete biographical information, a description of the proposed nominee's qualifications as a director and a representation that the nominating stockholder is a beneficial or record owner of our stock. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected.

Audit Committee and Audit Committee Financial Expert

Three directors comprise the Company's Audit Committee: Dr. Hixson (chair), Dr. Afting and Dr. Lindsay. The Audit Committee oversees our corporate accounting and financial reporting process. The Board of Directors annually reviews the Nasdaq Global Market ("Nasdaq") listing standards definition of independence for Audit Committee members and has determined that all members of the Audit Committee are independent (as independence is currently defined in Nasdaq Marketplace Rule 4200(a)(15) and Securities and Exchange Commission (the "SEC") Rule 10A-3). The Board of Directors has determined that Dr. Hixson qualifies as an "audit committee financial expert," as defined in applicable SEC rules. The Board of Directors made a qualitative assessment of Dr. Hixson's level of knowledge and experience based on a number of factors, including his formal education and experience as a chief executive officer or other senior executive officer for several companies.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires our directors and executive officers, and persons who own more than ten percent of a registered class of our equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of our common stock and other equity securities. Our officers, directors and greater than ten percent stockholders are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required, during the fiscal year ended December 31, 2006, all Section 16(a) filing requirements applicable to our officers, directors and greater than ten percent beneficial owners were complied with.

Code of Business Conduct and Ethics

We have adopted a code of business conduct and ethics for directors, officers (including our principal executive, financial and accounting officers) and all employees, which we refer to as our Code of Business Conduct and Ethics. The Code of Business Conduct and Ethics is available in the Corporate Governance section under "Investors" on our website at www.sequenom.com. Stockholders may request a free copy of our Code of Business Conduct and Ethics from:

Sequenom, Inc.
Attention: Investor Relations
3595 John Hopkins Court
San Diego, CA 92121-1331
(858) 202-9000

If we make any substantive amendments to the code of business conduct and ethics or grant any waiver from a provision of the code to any executive officer or director, we will promptly disclose the nature of the amendment or waiver in the Corporate Governance section under "Investors" on our website at www.sequenom.com. We will promptly disclose on our website (i) the nature of any amendment to the policy that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions and (ii) the nature of any waiver, including an implicit waiver, from a provision of the policy that is granted to one of these specified individuals, the name of such person who is granted the waiver and the date of the waiver.

Item 11. EXECUTIVE COMPENSATION.

EXECUTIVE COMPENSATION

The following discussion covers the compensation arrangements for the named executive officers identified in the Summary Compensation Table (the "NEOs") and our directors and includes a general discussion and analysis of our executive compensation program as well as a series of tables containing specific compensation information for our NEOs and directors. This discussion contains forward looking statements that are based upon our current executive compensation program, policies and methodologies. We may make changes in this program and these policies and methodologies in the future, and if made, we could have materially different compensation arrangements in the future.

COMPENSATION DISCUSSION AND ANALYSIS

Executive Compensation Philosophy

Our Compensation Committee establishes the executive compensation philosophy for our Company. The Compensation Committee has designed our executive compensation program to help us achieve our goals and objectives, including:

- Aligning our executive compensation with our business objectives;
- Making payments or providing other incentives based on our performance as measured against annual company goals set by our full Board of Directors;
- Attracting, retaining, motivating and rewarding executive officers (including the NEOs) and maintaining a stable management team comprised of individuals with substantial industry experience; and
- Aligning the financial interests of our executives with the long-term financial interests of our shareholders.

To accomplish these goals and objectives, we have created an executive compensation program comprised of three primary elements: base pay, an annual bonus program and a long term incentive program which uses equity awards.

Although it is not our policy or routine practice to enter into employment agreements with executive officers, employment agreements are used from time to time on a case by case basis, to attract and/or to retain executives. We currently maintain employment agreements with three of our NEOs; Dr. Stylli, Dr. Cantor and Mr. Neumann.

Additionally, we have created a change in control severance benefit plan which provides additional benefits for executive officers in the event that there is a change in control of our Company and an executive loses his or her job. Dr. Cantor, Mr. Neumann, Dr. Dragon participate in that plan and, prior to his departure in April 2007, Mr. Sharp also participated in the plan. Dr. Stylli has change in control provisions in his employment contract. We believe that these change in control benefits help us retain executive talent and, in the event of a potential change of control, allow the executives to focus on the potential transaction without concern for their personal near-term financial future. The potential for a participating executive to receive these change in control benefits will expire June 6, 2007, unless a protected termination of the executive occurs before that date. These change in control benefits are discussed in more detail in the "Change in Control Arrangements" section below and in the "Post-Employment Payments" section and table below.

The Compensation Committee's Role in the Executive Compensation Process

The Compensation Committee of our Board of Directors is comprised of three independent directors: Dr. Lindsay, Chairman of the Committee; Dr. Hixson; and Mr. Enright. The Committee has responsibilities vested in it by our Board of Directors as set forth in the Charter of the Compensation Committee which may be found in the Corporate Governance section under "Investors" on our website at www.sequenom.com. Among its responsibilities, the Committee provides guidance with respect to the purpose and principles behind the company's compensation decisions and overall compensation philosophy and objectives, and the Committee oversees our compensation policies, plans, and programs, and reviews and determines executive officer compensation.

Our Compensation Committee is actively involved in our executive compensation process. The Committee met seven times during 2006. During these meetings the Committee explored various alternatives to portions of the executive compensation program in addition to its regular duties of monitoring and approving compensation levels, approving the terms of compensation arrangements for new executives, and reviewing corporate goals as they relate to executive compensation. In addition to these meetings, throughout 2006 our Chief Executive

Officer, Compensation Committee members, and other members of our Board of Directors were involved in numerous discussions regarding compensation matters. The Compensation Committee maintains a calendar to make sure that selected matters (such as compensation strategy, base pay, variable pay and equity awards) are reviewed on an annual basis. The Compensation Committee did not use the services of an outside compensation consultant in 2006.

With respect to the annual bonus program, our Board of Directors, with input from our executive officers, defines measurable performance goals for the Company each year. Our Compensation Committee considers input from the full Board of Directors, applies weighting to each goal in view of each goals overall importance to the Company and establishes incentive compensation parameters that reward performance goal achievement.

The Components of Our Executive Compensation Program

Our executive compensation program consists of three main components: base pay; a cash and/or stock based annual incentive program ("annual bonus"); and stock options granted at fair market value to provide longer term incentives through appreciation in our stock. We also provide our executive officers, including NEOs, with the same package of employee benefits that are provided to all full time employees, including such programs as health insurance, group term life and disability insurance, and a discretionary matching contribution to our 401(k) plan, although no matching contributions were made in 2006. From time to time, NEOs may receive additional perquisites, as discussed further below and referenced in the Summary Compensation Table.

We have selected each of the executive compensation components for the following reasons:

- Taken as a whole, the components of the executive compensation program (base pay, annual bonus and equity grants) are comparable to the programs offered by other companies of our size in the life sciences industry; therefore, our program helps us attract new executive talent and retain, motivate, and reward the executives that we currently employ.
- The annual bonus program rewards executives for the satisfaction of Company goals that are established by the full Board of Directors. Compensation under this program directly reflects the Company's satisfaction of corporate objectives and reflects individual overall performance in the opinion of our Chief Executive Officer and the Compensation Committee members. Evaluation of individual overall performance for our Chief Executive Officer is performed solely by the Compensation Committee and in executive session deliberations without the Chief Executive Officer present. Payments under this program, partially paid in restricted stock for 2006, underscores our desire to have our executives focus their efforts on annual and longer-term company goals and to take actions that maximize shareholder value. Our Compensation Committee rewards executives only in the event of satisfactory Company and personal performance.
- Stock option grants to purchase our common stock serve three purposes: first, they are a retention device, as the executive must continue employment with us to vest his or her options and to exercise the options to realize value; second, they align the interests of management with those of our shareholders with the goal of creating long term growth and value for the Company; and third they allow us to attract and recruit new executives.

How the Amount of Each Component of Compensation Is Determined

Base Pay

The Compensation Committee reviews the base salary of each NEO as well as other executives on an annual basis. It is the Compensation Committee's intent to maintain base salary levels for executives within a salary range that has as its midpoint, the average level of pay for executives with similar duties at similarly sized companies in the life sciences industry. We maintain salary ranges for each executive position.

Our human resources department provides our Compensation Committee and our Chief Executive Officer with proposed salary ranges for each executive position as well as a summary of results from the AON Consulting/Radford Division 2005 Biotechnology Survey (the Radford Biotechnology Survey) for nationwide employers with between 50 and 149 employees.

Our Chief Executive Officer provides the Compensation Committee with proposals for base pay increases for the NEOs (as well as other executives). All proposed NEO base pay levels provided by our Chief Executive Officer to the Committee during 2006 were within our salary range for each position. The Compensation Committee reviews the Chief Executive Officer's proposals regarding NEO compensation as well as information provided to the Committee by our human resources department regarding base pay for chief executive officers. The Committee establishes the base pay for our NEOs and our Chief Executive Officer. When the Committee is discussing or evaluating compensation for our Chief Executive Officer, the Compensation Committee meets in executive session without our Chief Executive Officer present.

When granting base pay increases to the NEOs, the Compensation Committee focuses on various factors, including individual and corporate performance, the competitive market for the particular position, levels of responsibility, prior experience, breadth of industry knowledge and the relative pay for the position in the marketplace (as evidenced by the Radford Biotechnology Survey). Material increases or decreases in base pay are related to individual performance, internal pay equity, and survey information. Amounts realized in a prior year from annual bonuses or equity awards are not a factor in determining current year base pay increases.

Annual Bonus

At the beginning of 2006, our full Board of Directors, with input provided by our executive officers, established our Company goals for the year. The Compensation Committee then reviewed and considered a proposed Company-wide (including NEOs) bonus program in view of the Company goals, including proposed weighting of the goals for annual bonus achievement. In March 2006, the Compensation Committee reviewed additional information that it had requested regarding the proposed bonus program. The Compensation Committee deferred further action or approval until after the closing of the then pending private placement financing transaction which eventually closed in June 2006. Due to the timing of our June 2006 private placement financing transaction, decisions with respect to the bonus program (including the amount of the bonus pool to be allocated for potential payment in the event that Company goals were met) were deferred until the third quarter of 2006.

The goals for 2006 included:

- The completion of a round of corporate financing;
- A stated percentage increase in Company-wide revenue, as well as specific revenue increases in certain lines of business;
- A stated percentage improvement in gross margin, with targeted areas of improvement;
- New product launches;
- Creation of strategic partnership agreements; and
- Specified research and development initiatives.

Although our Board of Directors and our Compensation Committee have the discretion to make adjustments to our Company goals during the year, they generally believe that once our Company goals are established, they should not be changed. However, goals may change from time to time depending upon unforeseen and/or changed circumstances and in consideration of the best interests of the Company and its shareholders. The Company goals were not changed during 2006.

We maintain target levels for annual bonus awards. The Chief Executive Officer recommended for 2006 a target level award for the NEOs who reported to him, and those target levels were reviewed and approved by our Compensation Committee. The target level for annual bonus awards is determined by industry data (as set forth in the Radford Biotechnology Survey) and the value of the particular NEO to our Company as a whole and to our Company's key business initiatives. The target level for the annual bonus award for our Chief Executive Officer is specified in his employment contract.

If the established Company goals are attained, our Compensation Committee determines whether our Chief Executive Officer, our other NEOs and our other executive officers have each individually performed satisfactorily to warrant a bonus payment for the year. Our Chief Executive Officer proposes to the Compensation Committee individual annual bonus awards for the NEOs who report to him, as well as our other executives. Our Compensation Committee solely determines our Chief Executive Officer's annual bonus.

For 2006, the Compensation Committee determined that our Company goals were satisfied and that individual executive performance warranted bonuses and authorized payment of annual bonuses to our employees including NEOs. The following is a summary of the annual bonus, stated as a percentage of base pay, granted to each NEO:

Dr. Stylli	50%
Mr. Sharp	20%
Dr. Cantor	25%
Mr. Neumann	25%
Dr. Dragon	20%

For 2006, our Compensation Committee authorized the bonus awards for NEOs to be allocated between cash and restricted stock (with a one year cliff vesting period) in the following proportions: Chief Executive Officer—50% cash and 50% restricted stock; all other NEOs—60% cash and 40% restricted stock. The Compensation Committee decided to pay part of the annual bonus in restricted stock to preserve some of the Company's cash and for the inherent retention value of restricted stock due to the vesting provision. The restricted stock portion of the bonus was awarded in January 2007, and the cash portion of the bonus was paid in February 2007. The annual bonus payment to Dr. Dragon was pro-rated because she began employment with the Company in May 2006. Amounts realized in a prior year from annual bonuses or equity awards are not a factor in determining current year bonus targets. We have not adopted a policy regarding the repayment of annual bonus amounts by the NEOs in the event that a restatement of our financial statements adversely impacts us.

Equity Grants

Other than awards of restricted stock as part of the annual bonus awards (as discussed in the Annual Bonus section above), our equity grants during 2006 were in the form of Incentive Stock Options (ISOs), which are designed to qualify under Internal Revenue Code Section 422, and to the extent that those grants exceed the ISO limitations, non-qualified stock options. All of the options granted in 2006 were valued at fair market value as of the date of grant. The grants to all NEOs, except Dr. Dragon, vest on a monthly basis over four years; Dr. Dragon's grant was part of her offer and acceptance of employment, and vests 25% after one year from the grant date (her employment start date) and the remaining 75% vests on a monthly basis after that time for the next 36 months.

In connection with the award of equity grants, our Chief Executive Officer provided the Compensation Committee with an analysis of the Radford Biotechnology Survey information provided by our human resources department and a proposal for equity grants for the NEOs that report to him. The Compensation Committee reviewed our Chief Executive Officer's proposal and also reviewed information provided by our human resources department regarding grants made to chief executive officers in the Radford Biotechnology Survey. The Compensation Committee reviewed and approved the proposed grants for the NEOs and also approved a

grant for our Chief Executive Officer. Amounts realized in a prior year from annual bonuses or equity awards are not a factor in determining current year equity awards.

We do not time the granting of our options with any favorable or unfavorable news relating to the Company. Proximity of any awards to an earnings announcement, market event or other event related to us is purely coincidental.

We do not currently maintain stock ownership guidelines for NEOs, other executives, or Board members. We do maintain an insider trading policy that prohibits such individuals from short selling our stock, and although currently we do not prohibit the use of hedging instruments, we require that such individuals inform us of their use and we reserve the right to restrict or prohibit such use. During 2006, the use of a hedging instrument was not reported to us.

Other Compensation

Dr. Stylli, our Chief Executive Officer receives an additional term life and disability insurance benefit as provided under his employment agreement, and Dr. Stylli and Dr. Cantor each receive an additional medical expense reimbursement benefit. Dr. Dragon received a relocation expense reimbursement benefit and related tax gross-up benefit in connection with her hiring during 2006. All of the NEOs receive life and disability insurance benefits under the programs that are available to all employees. The additional compensation discussed under this section is shown in the "All Other Compensation" column of the Summary Compensation Table.

Change In Control Arrangements

We maintain a "Change in Control Severance Benefit Plan", which was effective on April 28, 2005. This Plan provides for severance payments to selected individuals, some of which are NEOs, in the event that a "Change in Control" occurs and the individual is terminated "without cause" or resigns for "good reason" as defined in the Plan. While Dr. Stylli is not a participant in the Plan, Dr. Stylli has change in control protection as set forth in his employment agreement. We consider the Plan, as well as Dr. Stylli's change in control protection, to have been triggered with the closing of our private placement financing transaction on June 6, 2006. This means that our NEOs, including Dr. Stylli, would each be entitled to certain change in control benefits if their employment was terminated by us without cause or by the NEO for good reason, before June 6, 2007. Benefits under the Plan and under Dr. Stylli's employment agreement are discussed in the "Post-Employment Payments" section below.

Policy Regarding Tax Deductibility of Executive Compensation

We do not currently have a policy regarding the limitation of executive pay to amounts that would be deductible under Internal Revenue Code Section 162(m).

Deferred Compensation Plan

In April 2007, the Compensation Committee approved a Deferred Compensation Plan that will allow eligible executives, including our NEOs, to defer receipt of their salary and cash bonus, and directors to defer their cash retainer and meeting fees, into bookkeeping accounts that permit the participants to select from a range of phantom investment alternatives that mirror the gains and losses of several different investment alternatives, including our common stock. Under the terms of the plan, participants will be permitted to defer up to 100% of their annual salary, bonus or director fees until a specified date, termination of service or a specified year following termination of service, as elected by the participant at the time of deferral. Additionally, under the terms of the plan, participants will be permitted to defer restricted stock unit awards granted under our equity incentive plan. We are not required to make any contributions to the plan, nor do we pay the expenses of the plan other then the expenses incurred in creating the plan. Participants have our unsecured contractual commitment to pay the amount due under the plan, which remains subject to the claims of our general creditors.

SUMMARY COMPENSATION TABLE

The following table provides information regarding the compensation earned by our NEOs during the fiscal year ended December 31, 2006.

Name and Principal Position	Year	Salary ($)	Option Awards ($)(3)	Non-Equity Incentive Plan Compensation ($)(4)	All Other Compensation ($)	Total ($)
Harry Stylli *Chief Executive Officer*	2006	420,000	526,058	210,000(5)	15,959(10)	1,172,017
John Sharp (1) *Former Principal Financial Officer*	2006	176,438	11,648	37,050(6)	651(11)	225,787
Charles Cantor *Chief Scientific Officer*	2006	294,480	50,081	74,160(7)	3,490(12)	422,211
Elizabeth Dragon (2) *Senior Vice President, R & D*	2006	166,015	19,358	33,264(8)	83,347(13)	301,984
Clarke Neumann *Vice President & General Counsel*	2006	227,900	26,493	58,050(9)	799(14)	313,242

(1) Mr. Sharp terminated his employment effective April 17, 2007.
(2) Employment began May 15, 2006.
(3) The amounts in this column reflect the dollar amount recognized for financial reporting purposes for the fiscal year ended December 31, 2006, in accordance with FAS 123(R). The method and assumptions used to calculate the value of the stock option awards are discussed in note 2 to our financial statements included in the Original Filing.
(4) Represents total value of bonus awards, comprising a combination of cash awards and restricted stock grants for each individual, awarded in January 2007 for fiscal year 2006 performance, and as discussed under the Compensation Discussion and Analysis section above.
(5) Dr. Stylli received a $105,000 cash payment and 22,807 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.
(6) Mr. Sharp received a $22,230 cash payment and 3,219 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.
(7) Dr. Cantor received a $44,496 cash payment and 6,444 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.
(8) Dr. Dragon received a $19,958 cash payment and 2,891 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.
(9) Mr. Neumann received a $34,830 cash payment and 5,044 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.
(10) Medical Expense Reimbursement, Life, and Disability Insurance.
(11) Life and Disability Insurance.
(12) Medical Expense Reimbursement, Life, and Disability Insurance.
(13) Relocation Expense Reimbursement and related tax gross-up, and Life and Disability Insurance.
(14) Life and Disability Insurance.

EMPLOYMENT CONTRACTS

We maintain employment contracts with three of our NEOs: Dr. Stylli, Dr. Cantor and Mr. Neumann. The following is a summary of the key terms of those contracts:

Dr. Stylli's Contract

In May 2005, we entered into an employment agreement with Dr. Stylli that provided for the employment of Dr. Stylli on an at-will basis commencing June 6, 2005 at an annual salary of $420,000. Pursuant to his employment agreement, Dr. Stylli is eligible for an annual performance bonus of up to 50% of his annual base salary. Dr. Stylli's employment agreement also provides for the grant of an inducement stock option to purchase 333,333 shares of our common stock at an exercise price of $3.30 per share, the fair market value of our common stock on his start date. These stock options are governed by our 1999 Stock Incentive Plan. The agreement also provided for a contingent stock option award. This stock option award to purchase an aggregate of 759,891 shares of our common stock was granted upon the closing of our private placement financing in June 2006 at an exercise price equal to the fair market value of our common stock on the closing date. These stock options are governed by our 2006 Equity Incentive Plan. Both stock option awards have a 10-year term, with the shares subject to each grant vesting in 48 equal monthly installments so long as Dr. Stylli continues to be our employee. Pursuant to his agreement, Dr. Stylli is eligible to participate in our employee benefits programs.

Dr. Stylli's employment agreement also provides for term life insurance coverage of $1 million and disability insurance providing long-term coverage of $20,000 per month, provided that the additional annual cost for such term life and disability insurance does not exceed $15,000. Dr. Stylli is entitled to certain payments in the event of the termination of his employment with us in connection with a change in control or under other circumstances; these payments are discussed in more detail in the "Post-Employment Payments" section below.

Mr. Neumann's Contract

In July 2004, we entered into an employment agreement with Mr. Neumann on an at-will basis. Mr. Neumann is entitled to certain payments in the event of the termination of his employment with us; these payments are discussed in more detail in the "Post-Employment Payments" section below. To receive these payments, he also agrees to provide consulting services to us, if requested. Mr. Neumann's employment agreement also provides that all of Mr. Neumann's stock options will become fully vested if and upon a majority of the outstanding shares of our common stock or all or substantially all of our assets are acquired by another business or by an individual. He is a participant in the Change in Control Severance Benefit Plan, also discussed in the "Post-Employment Payments" section below.

Dr. Cantor's Contract

Effective September 15, 2005, Dr. Cantor's amended employment agreement provides for employment on an at-will basis. Dr. Cantor is entitled to certain payments in the event of the termination of his employment with us; these payments are discussed in more detail in the "Post-Employment Payments" section below. Dr. Cantor's employment agreement requires that he provide us with consulting services, if we request, during the period that he receives termination payments. Dr. Cantor's agreement also provides that all of Dr. Cantor's stock options will become fully vested if and upon a majority of the outstanding shares of our common stock or all or substantially all of our assets are acquired by another business or by an individual. He is a participant in the Change in Control Severance Benefit Plan, also discussed in the "Post-Employment Payments" section below.

Post-Employment Payments

We currently provide post-employment payments to our NEOs in certain limited circumstances. Post-employment payments to our Chief Executive Officer, Dr. Stylli, are provided entirely through his employment contract. Payments to our Vice President and General Counsel, Mr. Neumann, and our Chief Scientific Officer, Dr. Cantor, are provided through their employment contracts and our Change in Control Severance Benefit Plan (the "Change in Control Plan"). Dr. Dragon, our Senior Vice President of Research and Development, does not have an employment contract and receives post-employment payments only through the Change in Control Plan. Mr. Sharp, our former Principal Financial Officer, did not have an employment contract and was entitled to receive post-employment payments only through the Change in Control Plan.

Post-Employment Payment Discussion

All of the agreements referenced above have the following common elements:

- No payments are made if there is a termination for cause.
- No payments are made as a result of retirement, death or disability.
- The total of any payments that would be subject to the 'golden parachute excise tax' under Internal Revenue Code Section 280G are limited to the amount that would result in no excise tax being imposed (or, if greater, an amount in which the executive receives a net after-tax payment if the excise tax is assessed).

Payments Under Employment Contracts That Are Not Related to a Change In Control:

Dr. Stylli. If Dr. Stylli's employment is terminated (i) without cause (as defined in his employment agreement) by us at any time or (ii) for good reason (as defined in his employment agreement) by Dr. Stylli, then Dr. Stylli is entitled to (1) base salary continuation for 12 months following the date of termination; (2) payments equal to 50% of his then current bonus eligibility amount, paid in equal monthly installments during the 12-month period he is entitled to base salary continuation; (3) continued health benefits for 12 months following the date of termination or until an earlier date that Dr. Stylli obtains new employment that provides comparable benefits; and (4) accelerated vesting of all stock options and other equity awards issued by us for a period of 12 months following the date of his termination.

Dr. Cantor and Mr. Neumann. Payments are only made in the event of a termination without cause. If Dr. Cantor's or Mr. Neumann's employment is terminated by us without cause (as defined in each of their employment agreements), then Dr. Cantor or Mr. Neumann, as the case may be, is entitled to receive severance benefits from us in the form of continuation of his base salary then in effect in periodic payments, and reimbursement of health insurance premiums for he and his family, to the same extent we provided during his employment by us, for a period commencing on the effective date of his termination and ending on the earlier of his commencement of employment with another employer or six months following the date of his termination. Each of Dr. Cantor and Mr. Neumann will be available to provide consulting services to us during the period he is receiving severance benefits from us.

Payments Under Employment Contracts That Are Related to a Change In Control:

Dr. Stylli is not covered under the Change in Control Plan. If Dr. Stylli's employment is terminated without cause by us or for good reason by Dr. Stylli within three months prior to or 12 months following a change in control (as defined in our Change in Control Plan), then Dr. Stylli is entitled to:

- base salary continuation for 18 months from the date of termination; 24 months if the aggregate consideration received by our stockholders and option holders in connection with the change in control is between $100 million and $250 million; and 36 months if the aggregate consideration received by our stockholders and option holders in connection with the change in control is greater than $250 million;
- payments equal to 150% of Dr. Stylli's then current bonus eligibility amount, paid in equal monthly installments during the period during which Dr. Stylli is entitled to base salary continuation; 200% if the aggregate consideration received by our stockholders and option holders in connection with the change in control is between $100 million and $250 million; and 300% if the aggregate consideration received by our stockholders and option holders in connection with the change in control is greater than $250 million;
- continued health benefits for 18 months following the date of termination or until such earlier date that Dr. Stylli obtains new employment that provides comparable benefits; and
- accelerated vesting in full of all stock options and other equity awards issued by us to Dr. Stylli.

Dr. Stylli's employment agreement provides for a potential reduction in the change in control payments to him if the payments are subject to the excise tax imposed on golden parachute payments and the reduction places him in a better after-tax situation than he would be in without the reduction. During the first 12 months of any severance period, Dr. Stylli is required to be available to provide up to ten hours per month of consulting services to us. We believe the sale of the securities in our private placement financing constituted the initial "change in control" under the terms of Dr. Stylli's employment agreement. As a result, if Dr. Stylli is terminated without cause by us or for good reason by Dr. Stylli within 12 months following the date of completion of our private placement financing in June 2006, he would be entitled to the benefits outlined above.

Dr. Cantor's and Mr. Neumann's employment agreements provide for full vesting of all outstanding stock options if and upon a majority of the outstanding shares of our common stock or all or substantially all of our assets are acquired by another business or by an individual.

Payments Under the Change In Control Plan:

In April 2005, we adopted the Change in Control Plan to provide severance benefits to designated senior level employees. Currently, Dr. Cantor, Dr. Dragon, and Mr. Neumann are designated to receive benefits following termination of employment in connection with the initial "change in control" (as defined in the Change in Control Plan). Mr. Sharp was also entitled to receive benefits under this Plan prior to his departure in April 2007.

The benefits under the Change in Control Plan apply only if the NEO's employment terminates within the specified periods before or after the initial change in control of the Company. There is no provision for benefits under the Change in Control Plan in connection with subsequent transactions that would have otherwise qualified as "changes in control." We believe the sale of the securities in our June 2006 private placement financing constituted the initial "change in control" under the terms of the Change in Control Plan.

The Change in Control Plan provides that if a designated NEO is terminated for any reason other than for "cause" or resigns for "good reason" (in each case, as defined in the Change in Control Plan) within three months prior to or 12 months following the closing of our private placement in June 2006, the NEO would continue to receive for a specified supplemental period his base salary, pro-rated bonus amount (calculated from the average of the two most recent annual bonuses paid to the NEO), health insurance and other benefits. The NEO also would receive immediate full vesting of all equity awards. These benefits would be in addition to any other severance benefits that the NEO has under an employment agreement with us.

For Dr. Cantor and Mr. Neumann, the continuation of salary payments and other benefits would be for an additional six months following the expiration of severance benefits under their employment agreements; Dr. Cantor's and Mr. Neumann's employment agreements provide initial severance benefits for up to six months.

Dr. Dragon does not have an employment agreement with us and Mr. Sharp did not have an employment agreement with us. The continuation of salary payments and other benefits would be for six months for Dr. Dragon under the Change in Control Plan and would have been for six months for Mr. Sharp prior to his departure in April 2007.

If a NEO begins employment with a new employer before the end of the specified supplemental period under the Change in Control Plan, the salary continuation would be reduced by the amount of compensation paid to the NEO by the new employer and the NEO would no longer be entitled to health insurance benefits if the new employer were to provide comparable coverage.

In the event that the termination of the NEO's employment (for reasons other than "Cause") or the NEO's resignation for "good reason" occurs within three months before or twelve months after the initial "change in control", the NEO is entitled to the following:

- Six months of base pay;
- One-half of the average of the two annual bonuses received by the NEO prior to the date of the termination of employment;
- Six months of health insurance under COBRA;
- Six months of out-of-pocket costs under Exec-U-Care, if the NEO participates in that program; and
- Full vesting of all equity based awards.

The Change in Control Plan provides for a potential reduction in the change in control payments to a NEO if the payments are subject to the excise tax imposed on golden parachute payments and the reduction places the NEO in a better after-tax situation than the NEO would be in without the reduction.

Potential Post-Employment Payments

The table below sets forth potential payments to our NEOs upon termination of employment or a change in control. The table reflects amounts payable to our NEOs assuming their employment was terminated on December 31, 2006. The value of equity awards was determined using the intrinsic value (market value less exercise price) of unvested equity awards as of December 31, 2006 that would become vested as a result of a such termination. The market value of our common stock used for such calculations was the closing price of our common stock on December 31, 2006 of $4.68 per share.

Name	Upon Termination Without Cause (1)	Upon Termination under Specified Circumstance Following a Change in Control (2)
Harry Stylli *Principal Executive Officer*	$1,273,483	$3,918,931
John Sharp *Former Principal Financial Officer*	—	$ 189,716
Charles Cantor *Chief Scientific Officer*	$ 152,320	$ 528,074
Elizabeth Dragon *Senior Vice President, R & D*	—	$ 405,564
Clarke Neumann *Vice President & General Counsel*	$ 120,100	$ 410,934

(1) Also includes, solely in the case of Dr. Stylli, his resignation for "good reason" pursuant to his employment agreement. Amounts include severance payments, any bonus amounts payable (solely in the case of Dr. Stylli), the value of any incremental benefits and the intrinsic value of equity awards that would become vested as a result of such termination. In the case of Dr. Cantor and Mr. Neumann, the amounts assume that each did not secure new employment until all severance payments are made under their employment agreements. Severance amounts and benefits would be paid on a monthly basis over 12 months for Dr. Stylli and over 6 months for each of Dr. Cantor and Mr. Neumann.

(2) Amounts include severance payments, any bonus amounts payable, the value of any incremental benefits and the intrinsic value of equity awards that would become vested as a result of such termination. The amounts in this column assume: (i) All NEOs except Dr. Stylli experience a "covered termination" under the

Change in Control Plan, are eligible for benefits, and do not secure new employment until all payments are made under the Change in Control Plan, and additionally in the case of Dr. Cantor and Mr. Neumann, until all payments are made under their employment contracts, (ii) Dr. Stylli experiences a termination in connection with a "change in control" under his employment contract and is eligible for benefits, and (iii) the "change in control" was effective June 6, 2006 and the aggregate consideration paid to the Company in connection with the "change in control" was less than $100 million. Severance amounts and benefits would be paid on a monthly basis over 18 months for Dr. Stylli, 12 months for Dr. Cantor and Mr. Neumann, and 6 months for Dr. Dragon and Mr. Sharp.

GRANTS OF PLAN-BASED AWARDS

The following table shows for the fiscal year ended December 31, 2006, certain information regarding grants of plan-based awards to the NEOs.

Name	Grant Date	Approval Date (1)	All Other Option Awards; Number of Shares of Stock or Units (#)	Exercise or Base Price of Option Awards ($/sh)	Grant Date Fair Value of Stock and Option Awards ($)
Harry Stylli	6/6/2006	6/6/2006	706,416(2)	$1.87	967,603
Chief Executive Officer	6/6/2006	6/6/2006	53,475(3)	$1.87	73,247
	7/10/2006	7/10/2006	303,978(2)	$1.72	382,834
John Sharp	6/6/2006	4/10/2006	25,000(3)	$1.87	34,243
Former Principal Financial Officer					
Charles Cantor	6/6/2006	4/10/2006	10,415(2)	$1.87	14,266
Chief Scientific Officer	6/6/2006	4/10/2006	72,918(3)	$1.87	99,878
Elizabeth Dragon	5/15/2006	3/20/2006	91,666(4)	$1.83	122,876
Senior Vice President, R & D					
Clarke Neumann	6/6/2006	4/10/2006	62,500(3)	$1.87	85,608
Vice President & General Counsel					

(1) This column reflects the date that the Board of Directors or the Compensation Committee took, as applicable, action to approve the stock option grant.
(2) Non-qualified stock option granted under 2006 Equity Incentive Plan.
(3) Incentive stock option granted under 2006 Equity Incentive Plan.
(4) New hire grant, incentive stock option granted under 1999 Stock Incentive Plan.

Outstanding Equity Awards at December 31, 2006

The following table sets forth certain information regarding outstanding equity awards for the NEOs for the fiscal year ended December 31, 2006.

	Option Awards			
Name	Number of Securities Underlying Unexercised Options – Exercisable (#)	Number of Securities Underlying Unexercised Options – Unexercisable (#)	Option Exercise Price ($)	Option Expiration Date
Harry Stylli	31,664(1)	272,314(1)	$ 1.72	7/10/2016
Chief Executive Officer	94,986(1)	611,430(1)	$ 1.87	6/6/2016
	0	53,475	$ 1.87	6/6/2016
	94,698(1)	117,423(1)	$ 3.30	6/6/2015
	30,303	90,909	$ 3.30	6/6/2015
John Sharp	3,125	21,875	$ 1.87	6/6/2016
Former Principal Financial Officer	903	1,263	$ 3.09	4/1/2015
	5,208	4,792	$ 2.52	11/10/2014
Charles Cantor	10,415(1)	0	$ 1.87	6/6/2016
Chief Scientific Officer	2	72,916	$ 1.87	6/6/2016
	17,755(1)	0	$ 8.76	10/24/2013
	45,578	0	$ 8.76	10/24/2013
	33,333(1)	0	$10.59	6/28/2012
	15,000(1)	0	$14.67	5/31/2012
	16,666(1)	0	$14.67	5/31/2012
	6,666(1)	0	$14.67	5/31/2012
Elizabeth Dragon	0	91,666	$ 1.83	5/15/2016
Senior Vice President, R & D				
Clarke Neumann	7,813	54,687	$ 1.87	6/6/2016
Vice President & General Counsel	1,146	1,604	$ 3.09	4/1/2015
	5,555	2,778	$ 7.92	4/16/2014
	2,291	278	$ 5.40	4/4/2013
	1,111	0	$ 4.23	10/14/2012
	10,000	0	$12.90	6/3/2012
	5,000	0	$14.67	5/31/2012
	1,334	0	$ 9.00	7/9/2009

(1) Non-qualified options.

Option Exercises and Stock Vested

None of the NEOs exercised any stock options during the fiscal year ended December 31, 2006.

Option Repricings

We have not engaged in any option repricings or other modifications to any of our outstanding equity awards during the year ended December 31, 2006.

Pension Benefits

None of our NEOs participates in or have account balances in pension plans sponsored by us.

NONQUALIFIED DEFERRED COMPENSATION

During 2006, none of our NEOs participated in or had account balances in nonqualified defined contribution plans or other nonqualified deferred compensation plans maintained by us.

On April 18, 2007, our Board of Directors approved our Deferred Compensation Plan (the "Plan"). The Plan is intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"). The Plan is intended to be an unfunded "top hat" plan which is maintained primarily to provide deferred compensation benefits for our directors and a select group of our "management or highly compensated employees" within the meaning of Sections 201, 301, and 401 of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and to therefore be exempt from the provisions of Parts 2, 3, and 4 of Title I of ERISA. The Plan is intended to help build a supplemental source of savings and retirement income through pre-tax deferrals of eligible compensation, which may include cash director fees, base salary, cash bonus awards, stock unit awards, discretionary cash awards and any other payments designated by the Plan committee as eligible for deferral under the Plan from time to time.

Unless otherwise determined by the Plan committee, directors and employees at a vice president level or above, including our executive officers, who are notified regarding their eligibility to participate and delivered the Plan enrollment materials are eligible to participate in the Plan ("Participants"). Under the Plan, we will provide Participants with the opportunity to make annual elections to defer a specified percentage of up to 100% of their eligible compensation. Elective deferrals of cash compensation are withheld from a Participant's paycheck and credited to a bookkeeping account established in the name of the Participant. The Participant is always 100% vested in his or her own elective cash deferrals and any earnings thereon. Elective deferrals of stock unit awards are credited to a bookkeeping account established in the name of the Participant with respect to an equivalent number of shares of our common stock, and such credited shares are subject to the same vesting conditions as are applicable to the stock unit award. We may also make discretionary contributions to Participants' accounts in the future, although we do not currently do so. Any discretionary contributions made by us in the future will be subject to such vesting arrangements as we may determine.

Amounts contributed to a Participant's account through elective deferrals of cash compensation or though our discretionary contributions are generally not subject to income tax, and we do not receive a deduction, until they are distributed pursuant to the Plan. However, cash deferrals are subject to the Federal Insurance Contributions Act tax imposed under Sections 3101 and 3121(v)(2) of the Code at the time of deferral (the "FICA tax"). Deferrals of stock unit awards are subject to the FICA tax at the time the stock unit awards vest, but are not subject to income tax, and we do not receive a deduction, until shares of our common stock are distributed pursuant to the Plan.

At the time of deferral, with respect to the allocation of amounts credited to their bookkeeping accounts, Participants may select from a range of phantom investment alternatives that mirror the gains or losses of several different investment funds, including our common stock. Deferrals of stock unit awards under the Plan are automatically allocated to our common stock fund and may not be allocated to any other fund. Any portion of the bookkeeping account initially allocated to our common stock fund may not be changed to another fund, and any portion of the account balance previously allocated to an investment fund may not be changed to our common stock fund.

Under the Plan, we will be obligated to deliver on a future date deferred compensation credited to the Participant's account, adjusted for any positive or negative investment results from the phantom investment alternatives selected by the Participant under the Plan (each, an "Obligation" and collectively, the "Obligations"). The Obligations are unfunded, unsecured general obligations of us and rank in parity with other unsecured and unsubordinated indebtedness of us, subject to the claims of our general creditors. The Obligations are not transferable except upon death of the Participant.

With respect to the portion of the bookkeeping account allocated to an investment fund other than our common stock fund, each Obligation will be payable in cash, commencing upon a distribution date selected by the Participant at the time of deferral. The portion of the bookkeeping account allocated to our common stock fund will be payable in shares of our common stock, commencing upon a distribution date selected by the Participant at the time of deferral.

Payments will be distributed in the form of a lump sum payment or in up to ten annual installments upon either termination of service or a selected specified distribution date or dates, depending upon the election made by the Participant at the time of deferral. If a Participant's service with us terminates prior to the selected specified distribution date or dates, payments will commence in connection with the termination of service. Payments triggered upon a termination of service will generally commence at termination of service. Payment triggered upon termination of service may also commence in a specified year up to five years following the date of termination of service in accordance with the Participant's deferral election if the Participant has completed as least five years of service with us at the time of termination. If a Participant's service terminates with us due to disability or the Participant is receiving installment payments and becomes disabled prior to payment of all the installments, the Obligation will become immediately payable. If the Participant's service terminates with us due to the Participant's death or the Participant is receiving installment payments and dies prior to payment of all the installments, the Obligation will either continue to be paid in accordance with the payment schedule that applied prior to the Participant's death or will become immediately payable if so specified in accordance with the Participant's deferral election. Any payments made to specified employees that commence upon a separation from service will be delayed six months in accordance with the requirements of Section 409A of the Code. Participants may be entitled to receive payments through certain unforeseeable emergency withdrawals. Payments scheduled to be made under the Plan may be otherwise delayed or accelerated only upon the occurrence of certain specified events that comply with the requirements of Section 409A of the Code.

A committee appointed by our Board of Directors administers the Plan. We can amend or terminate the Plan at any time, but no such action shall unilaterally reduce a Participant's account balance without his or her consent prior to the date of such action. We may adopt any amendments to the Plan that we deem necessary or appropriate to preserve the intended tax treatment of the Plan benefits or to otherwise comply with the requirements of Section 409A of the Code and related guidance.

DIRECTOR COMPENSATION

The following table sets forth in summary form information concerning the compensation that we paid during the fiscal year ended December 31, 2006 to each of our non-employee directors:

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)[5]	Total ($)
Harry Stylli [1]	—	—	—
Charles Cantor [1]	—	—	—
Harry F. Hixson, Jr.	49,000	19,622	68,622
Ernst-Guenter Afting	42,000	16,942	58,942
Patrick Enright	22,750	10,408	33,158
Larry E. Lenig, Jr.	21,750	10,408	32,158
Ronald M. Lindsay	36,000	18,494	54,494
Paul Hawran [2]	15,000	7,344	22,344
John Lucas [3]	48,250	7,989	56,239
Lawrence R. Moreau [4]	43,667	22,498	66,165

(1) Dr. Stylli, and Dr. Cantor are directors but received no additional compensation for board service. See the Summary Compensation Table for their compensation as officers.

(2) Served as director from August 2006 until February 2007.

(3) Served as director until June 2006.
(4) Served as director until May 2006.
(5) The amounts in this column reflect the dollar amount recognized for financial reporting purposes for the fiscal year ended December 31, 2006, in accordance with FAS 123(R). The method and assumptions used to calculate the value of the stock option awards are discussed in note 2 to our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2006 filed with the Securities and Exchange Commission on March 30, 2007.

We currently provide fees to our outside, independent directors for their service on our Board of Directors and on the committees of our Board. The director compensation program consists of two parts, cash payments and equity payments which are provided in the form of stock options granted at fair market value.

Cash Payments for Board and Committee Service

Our human resources department provided an analysis that was shared with our Board of Directors for Board of Director pay programs as reported in the Radford Biotechnology Survey for companies with employee counts of between 50 and 149.

Cash payments to our Directors are paid according to the following table.

Type of payment	Amount
Annual retainer for all Directors	$25,000
Additional annual retainer for the Chairman of the Board	$10,000
Additional annual retainer for the Chairman of the Audit Committee	$ 5,000
In person meeting fee for special meetings of the full Board of Directors	$ 1,500
Telephonic meeting fee for special meetings of the full Board of Directors	$ 1,000
Meeting fee for any special committee meeting, attended in person or by telephone	$ 1,000

Special committee meetings are defined as committee meetings that do not occur in conjunction with regularly scheduled Board meetings. The levels of the cash payments remain unchanged from 2005. Directors are entitled to reimbursement for their expenses incurred in connection with attendance of our Board of Directors and Committee meetings.

Lawrence R. Moreau did not stand for re-election as a Director during 2006. Mr. Moreau had been granted a contingent stock option award that was related to his continued service as a Director and the closing of the private placement financing. As Mr. Moreau's Board service terminated prior to the required service date, this award was not made. Mr. Moreau received a lump sum cash payment equal to the amount that he would have been paid as an annual retainer as chairman of the audit committee and for attendance at the regular meetings of the Board of Directors, for the twelve month period following termination of his service. Mr. Moreau also received full vesting of his October 25, 2005 stock option grant.

John E. Lucas resigned as a Director during 2006. As part of his agreement related to his resignation, Mr. Lucas received a lump sum cash payment equal to the amount that he would have been paid for attendance at the regular meetings of the Board of Directors for the twelve month period following his resignation. Under the agreement, Mr. Lucas also received a stock option grant (see table below under Equity Grants) as well as accelerated vesting of the shares subject to two other stock option grants.

Equity Grants

We have provided our non-employee Directors with grants of stock options in the past. A Director receives a stock option grant of 15,000 shares upon appointment to the Board and an automatic stock option grant of 15,000 shares on the date of our next annual stockholder meeting, provided that the Director has served on the Board of Directors for at least six months.

In April 2006, in anticipation of the private placement financing, the Board made a grant of stock options to each of the non-employee Directors that was contingent on the closing of the private placement transaction. Separate, automatic stock option grants as referred to above were not made in 2006. The private placement transaction closed on June 6, 2006 and stock option grants, except the grant to Mr. Hawran, were granted on that date as shown in the table below. Mr. Hawran joined the Board in August 2006 and was granted his stock option award at that time.

The following table sets forth the 2006 Non-Employee Director Stock Option Grants:

Name	# Shares
Harry F. Hixson, Jr.	50,000
Ernst-Guenter Afting	40,000
Patrick Enright	40,000
Larry E. Lenig, Jr.	40,000
Ronald M. Lindsay	40,000
Paul Hawran	40,000
John Lucas	3,889

The options vest in three equal annual installments beginning on the first anniversary of the grant date. Each option grant has a ten year term.

We also instituted a policy providing that any non-employee Director who is asked to resign from the Board before the 2007 annual stockholder meeting would receive accelerated vesting of all stock options held by the Director that would otherwise have vested if the Director had remained a Director until June 6, 2008, the second anniversary of the closing of the private placement financing.

Compensation Committee Interlocks And Insider Participation

The Compensation Committee consists of Dr. Lindsay, Dr. Hixson and Mr. Enright. No member of the Compensation Committee has ever been our officer or employee. None of our executive officers currently serves, or has served during the last completed fiscal year, on the compensation committee or board of directors of any other entity that has one or more executive officers serving as a member of our Board of Directors or Compensation Committee.

Report of the Compensation Committee of the Board of Directors*

The Compensation Committee has reviewed and discussed with management the Compensation Discussion and Analysis contained in this Amendment. Based on the review and discussion, the Compensation Committee has recommended to our Board of Directors that the Compensation Discussion and Analysis be included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2006, as amended.

Compensation Committee

Ronald M. Lindsay
Harry F. Hixson, Jr.
Patrick G. Enright

* The material in this report is not "soliciting material," is not deemed "filed" with the SEC and is not to be incorporated by reference in any filing of the Company under the Securities Act of 1933 Act, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Amendment and without regard to any general incorporation language therein.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

Securities Authorized for Issuance under Equity Compensation Plans

The following table provides certain information with respect to all of our equity compensation plans in effect as of December 31, 2006.

Equity Compensation Plan Information

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	16,017,470	$2.43	4,641,295[1][2]
Equity compensation plans not approved by security holders	— [3]	— [3]	—
Total	16,017,470	$2.43	4,641,295

Footnotes

(1) Of the 4,651,295 shares available for issuance, 662,596 are reserved for issuance under our 1999 Employee Stock Purchase Plan, or ESPP.

(2) Evergreen provisions:

ESPP Provision

The number of shares of our common stock available for issuance under the ESPP automatically increases on the first trading day of January each calendar year during the term of the ESPP, beginning with calendar year 2001, by an amount equal to 1% of the total number of shares of our common stock outstanding on the last trading day in December of the immediately preceding calendar year up to a maximum annual increase of 166,667 shares.

(3) Excludes outstanding options and warrants that were acquired in conjunction with our acquisition of Gemini Genomics in 2001 and Axiom Biotechnologies in 2002.

In connection with our acquisition of Gemini Genomics, a total of 184,195 options to purchase our common stock remain outstanding at a weighted average price of $52.76. Of these, 3,932 shares are reserved for issuance under the Gemini Genomics Company Share Option Plan-Part B, 4,845 shares are reserved for issuance under the Gemini International Executive Share Option Plan, 175,418 shares are reserved for issuance outside the plan.

In connection with our acquisition of Axiom Biotechnologies, a total of 14,012 options to purchase our common stock remain outstanding at a weighted average price of $13.32, 12,477 shares are reserved for issuance outside of the plan, and 1,535 shares are reserved for issuance under a warrant agreement.

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth certain information regarding the beneficial ownership of our common stock as of March 30, 2007 by: (i) each director; (ii) each of the named executive officers listed in the Summary Compensation Table; (iii) all of our executive officers and directors as a group; and (iv) each person, or group of affiliated persons, known by us to beneficially own more than five percent of our common stock.

Beneficial ownership has been determined in accordance with Rule 13d-3 under the 1934 Act. Under this rule, certain shares may be deemed to be beneficially owned by more than one person (if, for example, persons share the power to vote or the power to dispose of the shares). Shares are deemed to be beneficially owned by a person if the person has the right to acquire shares (for example, upon exercise of an option or warrant) within 60 days of the date of the information provided. In computing the percentage ownership of any person, the number of shares is deemed to include the number of shares beneficially owned by such person (and only such person) by reason of such acquisition rights. As a result, the percentage of outstanding shares of any person as shown in the following table does not necessarily reflect the person's actual voting power at any particular date.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Sequenom, Inc., 3595 John Hopkins Court, San Diego, California 92121.

	Beneficial Ownership(1)	
Beneficial Owner	**Number of Shares**	**Percent of Total**
ComVest Investment Partners II LLC (2) One North Clematis Street, Suite 300 West Palm Beach, Florida 33401	8,060,606	21.6%
Pequot Private Equity Fund IV, L.P. (3) c/o Pequot Capital Management, Inc. 500 Nyala Road, Westport, Connecticut 06880	7,333,333	19.6%
LB I Group Inc. (4) c/o Lehman Brothers Inc., 399 Park Avenue, Ninth Floor New York, New York 10022	6,272,726	17.3%
Siemens Venture Capital GMBH (5) 801 Boylston Street, 5th Floor Boston, Massachusetts 02116	3,878,787	11.1%
Directors and Executive Officers		
Harry Stylli, Ph.D. (6)	499,899	1.5%
Charles R. Cantor, Ph.D. (7)	297,941	*
Clarke Neumann (8)	54,568	*
John Sharp(9)	13,107	*
Ernst-Günter Afting, Ph.D., M.D. (10)	59,999	*
Harry F. Hixson, Jr., Ph.D. (11)	15,000	*
Ronald M. Lindsay, Ph.D. (12)	20,000	*
Patrick Enright	771	*
Paul Hawran	10,000	—
Larry F. Lenig, Jr. (13)	8,060,605	21.6%
Betty Dragon (14)	25,808	*
All directors and executive officers as a group (11 persons) (15)	9,124,731	24.0%

* Less than one percent.

(1) This table is based upon information supplied by officers, directors and principal stockholders and Schedules 13D and 13G filed with the SEC. To our knowledge, except as indicated in the footnotes to this

table and pursuant to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them. Applicable percentages are based on 33,449,683 shares outstanding on March 30, 2007, adjusted as required by SEC rules.

(2) Includes 3,818,181 shares of our common stock issuable pursuant to warrants exercisable within 60 days of March 30, 2007 by ComVest Investment Partners II LLC. ComVest Investment Partners II LLC, a Delaware limited liability company ("ComVest") is a private investment company. The managing member of ComVest is ComVest II Partners LLC, a Delaware limited liability company ("ComVest II Partners"), the managing member of which is ComVest Group Holdings, LLC, a Delaware limited liability company ("CGH"). Michael Falk ("Falk") is the Chairman and principal member of CGH. Robert Priddy ("Priddy") is a member of ComVest II Partners. Falk and Priddy, by virtue of their status as managing members of ComVest II Partners (the managing member of ComVest) and as the principal members of ComVest and ComVest II Partners, may be deemed to have indirect beneficial ownership of the shares of common stock beneficially owned by ComVest. However, Falk and Priddy disclaim any beneficial ownership of such shares. Larry Lenig, an employee of ComVest, is one of our directors.

(3) Includes 4,000,000 shares of our common stock issuable pursuant to warrants exercisable within 60 days of March 30, 2007 by Pequot Private Equity Fund IV, L.P. Excludes 771 shares of common stock held by Mr. Enright directly. Pequot Capital Management, Inc. ("PCMI") holds sole voting and dispositive power for all shares held by Pequot Private Equity Fund IV, L.P. (the "Fund"). Arthur J. Samberg is the chief executive officer, director and controlling shareholder of PCMI. PCMI and Mr. Samberg disclaim beneficial ownership of the securities held of record by the Fund, except to the extent of their pecuniary interest therein. Mr. Enright, a member of our Board of Directors, is a Managing Director of Longitude Capital, Inc., a consultant to PCMI and a member of the General Partner of the Fund. Mr. Enright may be deemed to beneficially own the securities held of record by the Fund. Mr. Enright disclaims beneficial ownership of the shares held by the Fund except to the extent of his pecuniary interest.

(4) Includes 2,727,272 shares of our common stock issuable pursuant to warrants exercisable within 60 days of March 30, 2007 by LB I Group Inc. LB I Group Inc. is a wholly owned subsidiary of Lehman Brothers Inc., a registered broker-dealer. Lehman Brothers Inc. is a wholly owned subsidiary of Lehman Brothers Holdings Inc., a public reporting company.

(5) Includes 1,454,545 shares of our common stock issuable pursuant to warrants exercisable within 60 days of March 30, 2007 by Siemens Venture Capital GMBH. Siemens Venture Capital GmbH, a company with limited liability organized under the laws of the Federal Republic of Germany, is a wholly owned subsidiary of Siemens Aktiengesellschaft, a public reporting stock corporation organized under the laws of the Federal Republic of Germany.

(6) Includes 411,126 shares of common stock that Mr. Stylli has the right to acquire from us upon the exercise of outstanding stock options within 60 days after March 30, 2007. Also includes 22,807 restricted shares of common stock that are subject to a repurchase option in favor of the Company in the event Dr. Stylli's employment is terminated prior to January 17, 2008.

(7) Includes 143,846 shares of common stock held of record by trusts related to Dr. Cantor and beneficially owned by Dr. Cantor and 154,095 shares of common stock that Dr. Cantor has the right to acquire from us upon the exercise of outstanding stock options within 60 days after March 30, 2007. Also includes 6,444 restricted shares of common stock that are subject to a repurchase option in favor of the Company in the event Dr. Cantor's employment is terminated prior to January 17, 2008.

(8) Includes 42,192 shares of common stock that Mr. Neumann has the right to acquire from us upon the exercise of outstanding stock options within 60 days after March 30, 2007. Also includes 5,044 restricted shares of common stock that are subject to a repurchase option in favor of the Company in the event Mr. Neumann's employment is terminated prior to January 17, 2008.

(9) Includes 13,107 shares of common stock that Mr. Sharp has the right to acquire from us upon the exercise of outstanding stock options within 60 days after March 30, 2007. Excludes 3,219 shares of restricted common stock repurchased by the Company upon Mr. Sharp's departure in April 2007.

(10) Includes 25,000 shares of common stock that Dr. Afting has the right to acquire from us upon the exercise of outstanding stock options within 60 days after March 30, 2007.

(11) Includes 15,000 shares of common stock that Dr. Hixson has the right to acquire from us upon the exercise of outstanding stock options within 60 days after March 30, 2007.

(12) Includes 15,000 shares of common stock that Dr. Lindsay has the right to acquire from us upon the exercise of outstanding stock options within 60 days after March 30, 2007.

(13) Includes 4,239,193 shares of common stock owned by ComVest and includes 3,818,181 shares of our common stock issuable pursuant to warrants exercisable within 60 days of March 30, 2007 by ComVest. Mr. Lenig disclaims beneficial ownership of these shares except to the extent of his pecuniary interest in ComVest entities.

(14) Includes 22,917 shares of common stock that Dr. Dragon has the right to acquire from us upon the exercise of outstanding stock options within 60 days of March 30, 2007. Also includes 2,891 restricted shares of common stock that are subject to a repurchase option in favor of the Company in the event Dr. Dragon's employment is terminated prior to January 17, 2008.

(15) Includes the 4,516,618 aggregate shares of common stock referred to in footnotes (6), (7), (8), (9), (10), (11), (12), (13) and (14) that such persons have the right to acquire from us upon the exercise of outstanding options and warrants within 60 days after March 30, 2007.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

Certain Transactions

Our Audit Committee is responsible for reviewing and approving or ratifying related-persons transactions. A related person is any executive officer, director, or more than 5% stockholder of the Company, including any of their immediate family members, and any entity owned or controlled by such persons.

Under our Audit Committee Charter, where a transaction has been identified as a related-person transaction, management must present information regarding the proposed related-person transaction to the Audit Committee for consideration and approval or ratification. Our Audit Committee will generally review the material facts with respect to any such transaction, the interests, direct and indirect, of the related persons, the benefits to the Company of the transaction and whether any alternative transactions were available. To identify related-person transactions in advance, the Company relies on information supplied by its executive officers, directors and certain significant stockholders. In considering related-person transactions, the Audit Committee may take into account the relevant available facts and circumstances including, but not limited to (a) the risks, costs and benefits to the Company, (b) the impact on a director's independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated, (c) the terms of the transaction, (d) the availability of other sources for comparable services or products and (e) the terms available to or from, as the case may be, unrelated third parties or to or from employees generally. In the event a director has an interest in the proposed transaction, the director would recuse himself from the deliberations and approval. Generally, in determining whether to approve, ratify or reject a related-person transaction, the Audit Committee would look at, in light of known circumstances, whether the transaction is in, or is not inconsistent with, the best interests of the Company and its stockholders, as the Audit Committee determines in the good faith exercise of its discretion.

Certain Related-Person Transactions

We have entered into employment agreements with certain of our officers. Please see "Employment Contracts" and "Post-Employment Payments" sections under "Executive Compensation" above.

Dr. Charles Cantor is our Chief Scientific Officer, a member of the Board of Directors and is a professor in the Department of Biomedical Engineering and Biophysics, and Co-Director of the Center for Advanced Biotechnology at Boston University. We have research agreements with Boston University in which Dr. Cantor participates under which we paid $400,000, $300,000, and $300,000, and we recorded product revenue for

MassARRAY hardware and consumables, totaling $100,000, $100,000 and $200,000 in the years ended December 31, 2006, 2005 and 2004, respectively. We have also loaned Boston University a MassARRAY system for use in their research programs.

Dr. Cantor is also an adjunct professor in the department of bioengineering at the University of California, San Diego. We recorded product revenue from UCSD for MassARRAY hardware and consumables, totaling $42,000 and $126,255 in the years ended December 31, 2006 and 2005, respectively.

We have entered into indemnity agreements with our officers and directors which provide, among other things, that we will indemnify such officer or director, under the circumstances and to the extent provided for therein, for expenses, damages, judgments, fines and settlements he may be required to pay in actions or proceedings which he is or may be made a party by reason of his position as a director, officer or other agent of ours, and otherwise to the full extent permitted under Delaware law and our Bylaws.

Independence of the Board of Directors

As required under applicable Nasdaq Marketplace Rules, a majority of the members of a listed company's board of directors must qualify as "independent," as affirmatively determined by the board of directors. Our Board of Directors consults with our counsel to ensure that the Board of Directors' determinations are consistent with all relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in pertinent Nasdaq Marketplace Rules, as in effect time to time.

The Board of Directors has three standing committees: an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. The Board of Directors has determined that each current member of each committee meets the applicable rules and regulations regarding independence for such committee, including those set forth in pertinent Nasdaq Marketplace Rules, and that each member is free of any relationship that would interfere with his individual exercise of independent judgment.

Consistent with these considerations, after review of all relevant transactions and relationships between each director or any of his family members, and our senior management, our independent registered public accounting firm and us, the Board of Directors affirmatively has determined that all of the directors are independent directors within the meaning of the applicable Nasdaq Marketplace Rules, except for Dr. Stylli, our Chief Executive Officer, and Dr. Cantor, our Chief Scientific Officer. As required under applicable Nasdaq Marketplace Rules, in 2006 our independent directors met in regularly scheduled executive sessions at which only independent directors were present.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

Principal Accountant Fees and Services

The following table represents aggregate fees billed to us for fiscal years ended December 31, 2006 and 2005, by Ernst & Young LLP, our principal independent registered public accounting firm.

	2006 Actual Fees	2005 Actual Fees
Audit Fees(1)		
Audit of consolidated financial statements, including subsidiary statutory audits and services associated with attestation of management's assertion over internal controls required by Section 404 of Sarbanes Oxley Act	$582,885	$ 842,232
Timely quarterly reviews	85,610	82,207
SEC filings, including comfort letters, consents and comment letters	12,034	—
Accounting consultations on matters addressed during the audit or interim reviews	13,020	—
Total Audit Fees	$693,549	$ 924,439
Audit Related Fees(2)		
Employee benefit plans	—	—
General assistance with implementation of the requirements of SEC rules or listing standards promulgated pursuant to the Sarbanes Oxley Act	13,759	1,500
Accounting consultation in connection with acquisitions	—	—
Total Audit Related Fees	$ 13,759	1,500
Tax Fees(2)		
Tax compliance services	$ 76,175	93,066
Tax Planning	—	—
Total Tax Fees	$ 76,175	93,066
Total Fees	$783,483	$1,019,005

(1) Includes fees and expenses related to the fiscal year audit and interim reviews, notwithstanding when the fees and expenses were billed or when the services were rendered. Fiscal year 2006 audit fees are preliminary, and subject to final settlement based upon actual hours incurred versus budgeted.

(2) Includes fees and expenses for services rendered from January through December of the fiscal year, notwithstanding when the fees and expenses were billed. Fiscal year 2006 tax compliance fees are preliminary, and subject to final settlement based upon actual hours incurred versus budgeted.

All fees described above were approved by the audit committee.

During the fiscal year ended December 31, 2006, none of the total hours expended on our financial audit by Ernst & Young LLP were provided by persons other than Ernst & Young LLP's full-time permanent employees.

Pre-Approval Policies and Procedures.

The Audit Committee pre-approves all audit and non-audit services rendered by our independent registered public accounting firm. The Audit Committee generally pre-approves specified services up to specified amounts. Under its charter, the Audit Committee may delegate the pre-approval of services to one or more of its members. Any such pre-approval must be reported to the full Audit Committee at its next meeting.

The Audit Committee has determined that the rendering of the services other than audit services by Ernst & Young LLP is compatible with maintaining the principal accountant's independence.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a)(1) *Financial Statements*

The financial statements of Sequenom, Inc. are included in the Original Filing.

(a)(2) *Financial Statement Schedules*

Schedule II—Valuation and Qualifying Accounts. The other financial statement schedules have been omitted because they are either not required, not applicable, or the information is otherwise included in the Original Filing.

(a)(3) *Exhibits*

A list of the exhibits filed or furnished with this Amendment or incorporated by reference to exhibits previously filed or furnished by us) is provided below. Those exhibits incorporated by reference herein are indicated as such by the information supplied in the corresponding footnote. Otherwise, the exhibits are filed herewith.

Exhibit Number	Description of Document
3.1[26]	Amended and Restated Certificate of Incorporation of the Registrant.
3.2[26]	Bylaws of Registrant, as amended.
4.1[26]	Specimen common stock certificate.
4.2[7]	Rights Agreement dated as of October 22, 2001 between the Registrant and American Stock and Transfer & Trust Company.
4.3[22]	Amendment to Rights Agreement dated March 27, 2006 between the Registrant and American Stock Transfer & Trust Company.
10.1[1]	Form of Warrant Agreement between the Registrant and holders of the Series C Preferred Stock warrants.
10.2[26]	Form of Indemnification Agreement between the Registrant and each of its officers and directors.
10.3[1]#	1994 Stock Plan.
10.4[1]#	1994 Stock Plan Form of Non-Qualified Stock Option Grant.
10.5[1]#	1994 Stock Plan Form of Incentive Stock Option Grant.
10.6[1]#	1994 Stock Plan Form of Stock Restriction Agreement.
10.7[1]#	1998 Stock Option/Stock Issuance Plan.
10.8[1]#	1998 Stock Option/Stock Issuance Plan Form of Notice of Grant of Stock Option.
10.9[1]#	1998 Stock Option/Stock Issuance Plan Form of Stock Option Agreement.
10.10[1]#	1998 Stock Option/Stock Issuance Plan Form of Stock Purchase Agreement.
10.11[1]#	1998 Stock Option/Stock Issuance Plan Form of Stock Issuance Agreement.
10.12[30]#	1999 Stock Incentive Plan, as amended.
10.13[1]#	1999 Employee Stock Purchase Plan.
10.14[1]#	1999 Stock Incentive Plan Form of Notice of Grant of Stock Option.
10.15[1]#	1999 Stock Incentive Plan Form of Stock Option Agreement.
10.16[26]#	2006 Equity Incentive Plan.

Exhibit Number	Description of Document
10.17[26]#	2006 Equity Incentive Plan Form of Notice of Grant of Stock Option.
10.18[26]#	2006 Equity Incentive Plan Form of Stock Option Agreement.
10.19[26]#	2006 Equity Incentive Plan Form of Exercise Notice.
10.20[2]	Business Loan Agreement, dated March 3, 2000, between the Registrant and Union Bank of California.
10.21[3]	Building Lease Agreement, dated March 29, 2000, between the Registrant and TPSC IV LLC, a Delaware limited liability company.
10.22[4]	Global Master Rental Agreement, dated May 4, 2000, between the Registrant and Comdisco.
10.23[6]#	First Amended and Restated Employment Agreement, dated as of August 1, 2000 between Andi Braun and the Registrant.
10.24[5]#	Employment Agreement between Registrant and Charles Cantor, Ph.D.
10.25[8]*	Collaboration Agreement, dated December 17, 2003, by and between the Registrant and Procter & Gamble Pharmaceuticals, Inc.
10.26[10]#	Exec-U-Care Plan.
10.27[29]#	Employment Agreement, dated July 19, 2004, by and between the Registrant and Clarke Neumann.
10.28[11]*	Diagnostic Platform Benchmarking Study and Evaluation, dated October 25, 2004, by and between the Registrant and Siemens AG.
10.29[11]#	Form of Stock Issuance Agreement under 1999 Stock Incentive Plan.
10.30[12]#	Separation Agreement, dated February 11, 2005, by and between the Registrant and Antonius Schuh, Ph.D.
10.31[14]#	Description of Bonus Program.
10.32[14]#	Second Amended and Restated Employment Agreement, dated April 28, 2005, by and between the Registrant and Steve Zaniboni.
10.33[14]#	Change in Control Severance Benefit Plan.
10.34[15]#	Employment Agreement, dated May 31, 2005, by and between the Registrant and Harry Stylli, Ph.D.
10.35[16]#	Separation Agreement, dated August 15, 2005, by and between the Registrant and Michael Terry.
10.36[17]	Amendment Number One to Lease, dated March 29, 2000, by and between the Registrant and TPSC IV LLC dated September 9, 2005.
10.37[17]	Common Stock Warrant, dated September 9, 2005, issued to Kwacker, Ltd.
10.38[17]#	Employment Agreement Amendment, dated September 12, 2005, by and between the Registrant and Dr. Charles R. Cantor.
10.39[18]#	Separation Agreement, dated October 4, 2005, by and between the Registrant and Stephen L. Zaniboni.
10.40[19]*	License Agreement, dated October 14, 2005, by and between the Registrant and Isis Innovation Limited.
10.41[20]#	Letter agreement, dated October 25, 2005, signed by Lawrence R. Moreau.
10.42[21]#	Separation agreement, dated October 24, 2005, between the Registrant and Andreas Braun, M.D., Ph.D.

Exhibit Number	Description of Document
10.43[23]	Amended and Restated Securities Purchase Agreement, dated March 30, 2006, by and among the registrant, ComVest Investment Partners II LLC, LB I Group Inc., Pequot Private Equity Fund IV, L.P. and Siemens Venture Capital GmbH.
10.44[23]	Form of Warrant issued pursuant to the Amended and Restated Securities Purchase Agreement dated March 30, 2006.
10.45[24]#	Letter agreement dated April 6, 2006, by and between the Registrant and John E. Lucas.
10.46[25]#	Letter agreement dated April 21, 2006, by and between the Registrant and Lawrence R. Moreau.
10.47[26]	Registration Rights Agreement dated June 6, 2006 by and between the Registrant, ComVest Investment Partners II LLC, LB I Group Inc., Pequot Private Equity Fund IV, L.P. and Siemens Venture Capital GmbH.
10.48[27]#	Letter agreement dated August 21, 2006, by and between the Registrant and Paul W. Hawran.
10.49[28]*	Amendment to Exclusive License of Technology Agreement dated October 19, 2006, by and between the Registrant and ISIS Innovation Limited.
10.50[28]*	Supply Agreement dated November 3, 2006, by and between the Registrant and Bruker Daltonics Inc.
21.1[29]	Subsidiaries of the Registrant.
23.1[30]	Consent of Independent Registered Public Accounting Firm.
31.1	Certification of Principal Executive Officer pursuant to Rule13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act, as amended.
31.2	Certification of Principal Financial Officer pursuant to Rule13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act, as amended.
32.1[30]	Certification of Principal Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2[30]	Certification of Principal Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

\# Management contract or compensatory plan.

* Certain confidential portions of this Exhibit have been omitted pursuant to a request for confidential treatment. Omitted portions have been filed separately with the Securities and Exchange Commission.

(1) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (No. 333-91665), as amended.

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

(3) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2000.

(4) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2000.

(5) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (No. 333-91665), as amended, which exhibit was supplemented with an additional Schedule A filed the Registrant's Annual Report on Form 10-K for the year ended December 31, 2000.

(6) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2000.

(7) Incorporated by reference to the Registrant's Current Report on Form 8-K filed October 23, 2001.

(8) Incorporated by reference to the Registrant's Current Report on Form 8-K filed February 10, 2004.

(9) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2002.

(10) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2003.
(11) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004.
(12) Incorporated by reference to the Registrant's Current Report on Form 8-K filed February 14, 2004.
(13) Incorporated by reference to the Registrant's Registration Statement on Form S-8 (No. 333-125456).
(14) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2005.
(15) Incorporated by reference to the Registrant's Current Report on Form 8-K filed June 1, 2005.
(16) Incorporated by reference to the Registrant's Current Report on Form 8-K filed August 17, 2005.
(17) Incorporated by reference to the Registrant's Current Report on Form 8-K filed September 14, 2005.
(18) Incorporated by reference to the Registrant's Current Report on Form 8-K filed October 7, 2005.
(19) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2005.
(20) Incorporated by reference to the Registrant's Current Report on Form 8-K with respect to Items 1.01, 5.02 and 9.01 filed October 28, 2005.
(21) Incorporated by reference to the Registrant's Current Report on Form 8-K with respect to Items 1.01, 1.02 and 9.01 filed October 28, 2005.
(22) Incorporated by reference to the Registrant's Current Report on Form 8-K filed March 28, 2006.
(23) Incorporated by reference to the Registrant's Current Report on Form 8-K filed April 3, 2006.
(24) Incorporated by reference to the Registrant's Current Report on Form 8-K filed April 10, 2006.
(25) Incorporated by reference to the Registrant's Current Report on Form 8-K filed April 27, 2006.
(26) Incorporated by reference to the Registrant's Current Report on Form 8-K filed June 6, 2006.
(27) Incorporated by reference to the Registrant's Current Report on Form 8-K filed August 25, 2006.
(28) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2006.
(29) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
(30) Filed with the Original Filing.

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.

Date: April 23, 2007

SEQUENOM, INC.

By: /s/ HARRY STYLLI

Harry Stylli
President and Chief Executive Officer

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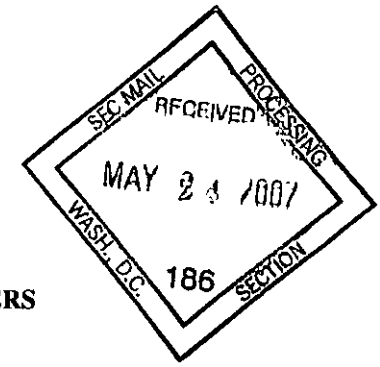

SEQUENOM, INC.
3595 John Hopkins Court
San Diego, California 92121
(858) 202-9000

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON JUNE 15, 2007

To the Stockholders of Sequenom, Inc.:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Stockholders of Sequenom, Inc., a Delaware corporation (the "Company"), will be held on Friday, June 15, 2007 at 9:00 a.m. local time at the corporate headquarters of the Company located at 3595 John Hopkins Court, San Diego, California 92121 for the following purposes:

1. to elect six directors to hold office until the annual meeting of stockholders in 2008;
2. to ratify our Audit Committee's selection of Ernst & Young LLP to be our independent registered public accounting firm for 2007; and
3. to conduct any other business properly brought before the meeting or any adjournment or postponement thereof.

These items of business are more fully described in the Proxy Statement accompanying this Notice of Annual Meeting.

The record date for the Annual Meeting is April 27, 2007. Only stockholders of record at the close of business on that date may vote at the meeting or any adjournment thereof.

BY ORDER OF THE BOARD OF DIRECTORS

Harry Stylli
President and Chief Executive Officer

San Diego, California

May 17, 2007

ALL STOCKHOLDERS ARE CORDIALLY INVITED TO ATTEND THE MEETING IN PERSON. WHETHER OR NOT YOU EXPECT TO ATTEND THE MEETING, PLEASE COMPLETE, DATE, SIGN AND RETURN THE ENCLOSED PROXY AS PROMPTLY AS POSSIBLE IN ORDER TO ENSURE YOUR REPRESENTATION AT THE MEETING. A RETURN ENVELOPE (WHICH IS POSTAGE PREPAID IF MAILED IN THE UNITED STATES) IS ENCLOSED FOR THAT PURPOSE. EVEN IF YOU HAVE GIVEN YOUR PROXY, YOU MAY STILL VOTE IN PERSON IF YOU ATTEND THE MEETING. PLEASE NOTE, HOWEVER, THAT IF YOUR SHARES ARE HELD OF RECORD BY A BROKER, BANK OR OTHER NOMINEE AND YOU WISH TO VOTE AT THE MEETING, YOU MUST OBTAIN FROM THE RECORD HOLDER A PROXY ISSUED IN YOUR NAME.

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SEQUENOM, INC.
3595 John Hopkins Court
San Diego, California 92121
(858) 202-9000

PROXY STATEMENT
FOR ANNUAL MEETING OF STOCKHOLDERS
June 15, 2007

QUESTIONS AND ANSWERS ABOUT THIS PROXY MATERIAL AND VOTING

Why am I receiving these materials?

We sent you this proxy statement and the enclosed proxy card because the Board of Directors of Sequenom, Inc. (sometimes referred to as the "Company" or "Sequenom") is soliciting your proxy to vote at our 2007 Annual Meeting of Stockholders. You are invited to attend the annual meeting to vote on the proposals described in this proxy statement. However, you do not need to attend the meeting to vote your shares. Instead, you may simply complete, sign and return the enclosed proxy card.

We intend to mail this proxy statement and accompanying proxy card on or about May 17, 2007 to all stockholders of record entitled to vote at the annual meeting.

What am I voting on?

There are two matters scheduled for a vote at the annual meeting:

- Election of six directors; and
- Ratification of the selection by the Audit Committee of our Board of Directors of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2007.

If any other matter is properly presented at the meeting or any adjournment or postponement thereof, your proxy (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

Who can vote at the annual meeting?

Only stockholders of record at the close of business on April 27, 2007 will be entitled to vote at the annual meeting. At the close of business on this record date, there were 38,134,321 shares of common stock outstanding and entitled to vote.

Stockholder of Record: Shares Registered in Your Name

If at the close of business on April 27, 2007 your shares were registered directly in your name with our transfer agent, American Stock Transfer & Trust Company, then you are a stockholder of record. As a stockholder of record, you may vote in person at the meeting or vote by proxy. Whether or not you plan to attend the meeting, we urge you to complete and return the enclosed proxy card to ensure your vote is counted.

Beneficial Owner: Shares Registered in the Name of a Broker or Bank

If at the close of business on April 27, 2007 your shares were held in an account at a brokerage firm, bank, dealer, or other similar organization, then you are the beneficial owner of shares held in street name, and these proxy materials are being forwarded to you by that organization. The organization holding your account is considered the stockholder of record for purposes of voting at the annual meeting. As a beneficial owner, you have the right to direct your broker or other agent on how to vote the shares in your account. You are also invited

to attend the annual meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the meeting unless you request and obtain a valid proxy from your broker or other agent.

How do I vote?

You may either vote "For" all the nominees to the Board of Directors or you may abstain from voting for any nominee you specify. You cannot vote for a greater number of persons than the number of nominees to the Board of Directors named. For each of the other matters to be voted on, you may vote "For" or "Against" or abstain from voting. The procedures for voting are fairly simple:

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record, you may vote in person at the annual meeting or vote by proxy using the enclosed proxy card. Whether or not you plan to attend the meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the meeting and vote in person if you have already voted by proxy.

- To vote using the proxy card, simply complete, sign and date the enclosed proxy card and return it promptly in the envelope provided. If you return your signed proxy card to us before the annual meeting, we will vote your shares as you direct.
- To vote in person, come to the annual meeting, and we will give you a ballot when you arrive.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If you are a beneficial owner of shares registered in the name of your broker, bank or other agent, you should have received a proxy card and voting instructions with these proxy materials from that organization rather than from us. Simply complete and mail the proxy card to ensure that your vote is counted.

To vote in person at the annual meeting, you must obtain a valid proxy from your broker, bank or other agent. Follow the instructions from your broker or bank included with these proxy materials or contact your broker or bank to request a proxy form.

How many votes do I have?

On each matter to be voted upon, you have one vote for each share of common stock you own as of the close of business on April 27, 2007.

What if I return a proxy card but do not make specific choices?

If you return a signed and dated proxy card without marking any voting selections, your shares will be voted "For" the election of all nominees for director and "For" all other matters described in this proxy statement. If any other matter is properly presented at the meeting, your proxy will vote your shares using his or her best judgment.

What does it mean if I receive more than one proxy card?

If you receive more than one proxy card, your shares are registered in more than one name or are registered in different accounts. Please complete, sign and return each proxy card to ensure that all of your shares are voted.

Can I change my vote after submitting my proxy?

Yes. You can revoke your proxy at any time before the final vote at the meeting. You may revoke your proxy in any one of three ways:

- You may submit another properly completed proxy card with a later date.

- You may send a written notice that you are revoking your proxy to Sequenom's Secretary at 3595 John Hopkins Court, San Diego, California 92121.
- You may attend the annual meeting and vote in person. Simply attending the meeting will not, by itself, revoke your proxy.

How are votes counted?

Votes will be counted by the inspector of election appointed for the meeting, who will separately count "For" and, with respect to proposals other than the election of directors, "Against" votes, abstentions and broker non-votes. Abstentions will be counted towards the vote total for each proposal (other than the election of directors) and will have the same effect as "Against" votes. Broker non-votes are counted towards a quorum and depending on the proposal will have the same effect as an "Against" vote on the proposal or have no effect. Please see the more detailed description of the effect of broker non-votes on specific proposals in the answer to "How many votes are needed to approve each proposal?" below.

If your shares are held by your broker as your nominee (that is, in street name), you will need to obtain a proxy card from the institution that holds your shares and follow the instructions included on that proxy card regarding how to instruct your broker to vote your shares. If you do not give instructions to your broker, your broker can vote your shares with respect to "discretionary" items but not with respect to "non-discretionary" items. Discretionary items are proposals considered routine under the rules of the New York Stock Exchange on which your broker may vote shares held in street name in the absence of your voting instructions. On non-discretionary items for which you do not give your broker instructions, the shares will be treated as broker non-votes.

How many votes are needed to approve each proposal?

- For the election of directors, the six nominees receiving the most "For" votes from the shares present and entitled to vote at the annual meeting, either in person or by proxy, will be elected. Broker non-votes will have no effect.
- To be approved, Proposal 2 must receive "For" votes from a majority of the shares present and entitled to vote at the annual meeting, either in person or by proxy. If you select "Abstain" on your proxy card or you attend the meeting and abstain from voting, it will have the same effect as an "Against" vote. Broker non-votes will have no effect.

What is the quorum requirement?

A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if at least a majority of the outstanding shares are represented by stockholders present at the meeting or by proxy. On April 27, 2007, the record date, there were 38,134,321 shares outstanding and entitled to vote. As a result 19,067,161 of these shares must be represented by stockholders present at the meeting or by proxy to have a quorum.

Your shares will be counted towards the quorum only if you submit a valid proxy vote or vote at the meeting. Abstentions and broker non-votes will be counted towards the quorum requirement. If there is no quorum, a majority of the votes present at the meeting may adjourn the meeting to another date.

How can I find out the results of the voting at the annual meeting?

Preliminary voting results will be announced at the annual meeting. Final voting results will be published in our quarterly report on Form 10-Q for the second quarter of 2007.

Who is paying for this proxy solicitation?

We will pay for the entire cost of soliciting proxies. In addition to these mailed proxy materials, our directors, officers and other employees may also solicit proxies in person, by telephone or by other means of

communication. Directors, officers and other employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

When are stockholder proposals due for next year's annual meeting?

The deadline for submitting a stockholder proposal for inclusion in our proxy statement and form of proxy for the 2008 annual meeting of stockholders is January 18, 2008. Stockholders wishing to submit proposals or director nominations that are not to be included in such proxy statement and proxy must also do so by January 18, 2008. Stockholders are advised to review our Bylaws, which contain additional requirements with respect to advance notice of stockholder proposals and director nominations. Our current Bylaws are available at the SEC's website, *www.sec.gov*, or upon written request to Secretary, Sequenom, Inc., 3595 John Hopkins Court, San Diego, California 92121.

PROPOSAL 1

ELECTION OF DIRECTORS

Our Board of Directors is currently comprised of seven members and is nonclassified. Each director serves for a one-year term. At the annual meeting, the term of office of all seven directors will expire.

The Nominating and Corporate Governance Committee of the Board of Directors has nominated Ernst-Gunter Afting, Ph.D., M.D., Charles R. Cantor, Ph.D., Patrick G. Enright, Harry F. Hixson, Jr., Ph.D., Ronald M. Lindsay, Ph.D., and Harry Stylli, Ph.D. for re-election to the Board of Directors. There will be one vacancy on the Board of Directors following the decision on May 9, 2007 of Larry E. Lenig, Jr. not to stand for re-election. If re-elected at the annual meeting, each nominee would serve until the 2008 annual meeting and his successor is elected and qualified.

Directors are elected by a plurality of the votes present in person or represented by proxy and entitled to vote at the annual meeting. Stockholders may not vote for a greater number of nominees than six. Shares represented by executed proxies will be voted, if authority to do so is not withheld, for the election of Dr. Afting, Dr. Cantor, Mr. Enright, Dr. Hixson, Dr. Lindsay and Dr. Stylli. In the event that any nominee should be unavailable for election as a result of an unexpected occurrence, such shares will be voted for the election of such substitute nominee as the Nominating and Corporate Governance Committee may propose. Each of the nominees has agreed to serve if elected, and we have no reason to believe that any nominee will be unable to serve.

Set forth below is biographical information for each person nominated.

Ernst-Günter Afting, Ph.D., M.D.

Dr. Afting, 64, has served as a director since 1996. From 1995 until his retirement in 2006, Dr. Afting served as President and Chief Executive Officer of the National Research Center for Environment and Health, GSF-Forschungszentrom für Umwelt und Gesundheit GmbH, in Munich, one of the biggest governmental research centers in Germany. From 1993 to 1995, he served as President and Chief Executive Officer of Roussel UCLAF, Paris. He was also a member of the board of the Pharmaceutical Division of Hoechst Group from 1984 to 1993 and was Chairman and Chief Executive Officer of the Divisional Pharmaceutical Board of Hoechst from 1992-1993. Dr. Afting was a member of the advisory committee on Science and Technology to German Chancellor Helmut Kohl from 1996 to 1997 and from 1996 to 2005 has been a member of the German National Advisory Committee on Health Research to the State Secretaries of Science, Technology and Health. Dr. Afting has been a member of the medical faculty at the University of Goettingen since 1985. Dr. Afting currently serves on the boards of Intercell AG, Vienna, Enanta Pharmaceuticals, Inc., and Olympus Europa GmbH, Hamburg. He received his Ph.D. in Chemistry and M.D. from the University of Freiburg/Breisgau, Germany.

Charles R. Cantor, Ph.D.

Dr. Cantor, 64, joined us as Chief Scientific Officer and Chairman of the Scientific Advisory Board in August 1998. Since 1992 Dr. Cantor has served as a professor in the Department of Biomedical Engineering and Co-Director of the Center for Advanced Biotechnology at Boston University. Prior to that time, Dr. Cantor held positions at Columbia University and the University of California, Berkeley. He was also Director of the Human Genome Center of the Department of Energy at Lawrence Berkeley Laboratory. Dr. Cantor published the first textbook on genomics, *The Science and Technology of the Human Genome Project*, and remains active in the Human Genome Project through his membership in a number of the project's advisory committees and review boards. Dr. Cantor is a member of the National Academy of Sciences. He is also a scientific advisor to 12 biotech and life science companies and one venture capital firm. Dr. Cantor currently serves as a director of ExSAR, Inc., Human BioMolecular Research Institute, and Retrotrope, Inc. Dr. Cantor received his Ph.D. in Chemistry from the University of California, Berkeley.

Patrick G. Enright

Mr. Enright, 45, has served as a director since June 2006. Mr. Enright is a founder and Managing Director of Longitude Capital, a life sciences venture capital firm specializing in medical devices and biotechnology. From 2002 through 2006, Mr. Enright was a Managing Director of Pequot Ventures, the direct venture investment arm of Pequot Capital Management, Inc., and has been a member of various general partnerships of Pequot's venture capital and private equity funds since June 2002. Mr. Enright is currently a consultant for Pequot Capital Management, Inc. From 1998 to 2001, Mr. Enright was a Managing Member of Diaz & Atschul Group, LLC, a principal investment group. From 1995 to 1998, he served in various executive positions at Valentis, Inc., a biotechnology company engaged in the development of products for peripheral arterial disease, including as Senior Vice President, Corporate Development, and Chief Financial Officer. From 1993 to 1994, he was Senior Vice President of Finance and Business Development for Boehringer Mannheim Therapeutics, a pharmaceutical company and a subsidiary of Corange Ltd. From 1989 to 1993, Mr. Enright was employed at PaineWebber Incorporated, an investment banking firm, where he became a Vice President in 1992. Mr. Enright currently serves on the boards of Threshold Pharmaceuticals, Inc., DiObex, Codexis, Horizon Therapeutics, MAP Pharmaceuticals, Prestwick Pharmaceuticals, Raven biotechnologies and InfaCare Pharmaceuticals. Mr. Enright earned a B.S. in Biological Sciences from Stanford University and a M.B.A. from the Wharton School of Business at the University of Pennsylvania.

Harry F. Hixson, Jr., Ph.D.

Dr. Hixson, 68, has served as Chairman of our Board of Directors since January 2003. Dr. Hixson has also served as a director of Arena Pharmaceuticals, Inc. since 2004, and currently serves as the Chairman of the Board of BrainCells, Inc., a privately held biopharmaceutical company focused on central nervous system drug development. He has served as Chairman of BrainCells since December 2003. Dr. Hixson serves as a member of the Board of Directors of Infinity Pharmaceuticals, Inc., a cancer drug discovery and development company. Dr. Hixson previously served as chairman of the Board of Directors of Discovery Partners International, Inc. prior to its merger with Infinity Pharmaceuticals. Dr. Hixson served as Chief Executive Officer of BrainCells from July 2004 until September 2005. Dr. Hixson served as Chief Executive Officer of Elitra Pharmaceuticals, Inc., a privately held biopharmaceutical company focused on anti-infective drug development, from February 1998 until May 2003. He served as Amgen's President and Chief Operating Officer and as a member of its Board of Directors from 1988 to 1991. Prior to Amgen, Dr. Hixson held various management positions with Abbott Laboratories, including Vice President, Diagnostic Products Business Group, and Vice President, Research and Development, in the Diagnostics Division. He has been involved with the start-up of several biopharmaceutical companies, including Neurocrine Biosciences and Signal Pharmaceuticals, now part of Celgene. Dr. Hixson received his Ph.D. in Physical Biochemistry from Purdue University and an M.B.A. from the University of Chicago. He also received an Honorary Doctor of Science degree from Purdue University.

Ronald M. Lindsay, Ph.D.

Dr. Lindsay, 59, has been a director since May 2003. He currently operates Milestone Consulting, a biopharmaceutical consulting enterprise. He served as Vice President, Research and Development, and Chief Science Officer of diaDexus Inc., a privately held biotechnology company, from 2000 to January 2004. From 1997 through 2000, Dr. Lindsay served in various roles with Millennium Pharmaceuticals, Inc., a publicly traded biopharmaceutical company, including Senior Vice President, Biotherapeutics and Vice President, Preclinical Research and Development, of its subsidiary Millennium Biotherapeutics Inc. From 1989 to 1997, Dr. Lindsay served in various roles with Regeneron Pharmaceuticals Inc., of which he was a founding scientist, holding the position of Vice President, Neurobiology. He is a director of Arqule Inc., HistoRx Inc., and Neuro3D, a member of the scientific advisory board of Serono S.A. and a Senior Advisor to TVM Capital, Munich. Dr. Lindsay is the author of more than 150 scientific publications and holder of multiple patents. Dr. Lindsay received his Ph.D. in Biochemistry from the University of Calgary.

Harry Stylli, Ph.D.

Dr. Stylli, 45, joined us in June 2005 as President and Chief Executive Officer and a director. From November 2004 to February 2005, Dr. Stylli served as President and Chief Executive Officer of Xencor, Inc., a privately held, next-generation antibody platform company. From May 2002 to July 2003, Dr. Stylli served as President and Chief Executive Officer for CovX Pharmaceuticals, a biopharmaceutical company of which Dr. Stylli was a co-founder. From 1995 to 2001, Dr. Stylli served in various capacities, including Senior Vice President of Screening Technology and New Ventures, Senior Vice President of Commercial Development and most recently President, for Aurora Biosciences Corporation, a drug discovery systems company of which Dr. Stylli was a co-founder. Dr. Stylli currently serves as a director of Molecular Insight Pharmaceuticals, Inc., a publicly held biotechnology company, and is an advisor to Nanosyn, a privately held medicinal chemistry company. Dr. Stylli received his Ph.D. from London University's Faculty of Medicine and an M.B.A. from the United Kingdom's Open University.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE IN FAVOR OF EACH NAMED NOMINEE.

Director Whose Term Expires at the Annual Meeting

Larry E. Lenig, Jr.

Mr. Lenig, 58, has served as a director since June 2006. Mr. Lenig currently serves as Senior Partner of ComVest Investment Partners, a private equity capital fund group, and as the portfolio manager of ComVest Capital LLC, an affiliated fund initiated by ComVest Investment Partners in 2006. Mr. Lenig joined ComVest Investment Partners in August 2004. From 1994 to 2004, Mr. Lenig acted as a consultant and advisor to a number of public and private businesses in a diverse range of industries, including oil and gas, software and related services, metal products manufacturers and restaurant chains. During that period, Mr. Lenig also served as Chief Executive Officer and directed turnarounds at two public companies, Grant Geophysical, Inc., an international geophysical services provider, and Seitel, Inc., which owns and offers for license one of the world's largest U.S. and Canadian focused 3D and 2D seismic data libraries, and consulted to other private companies during reorganizations and restructuring of those enterprises. Prior to entering private consulting, Mr. Lenig spent 19 years with and served as Chief Operating Officer, President and a director of Digicon Inc. (now called Veritas DGC, Inc., a New York Stock Exchange-listed integrated oil service company specializing in onshore and offshore geophysical data acquisition, advanced data processing and the ownership of data libraries), following an initial career as a commercial lender for a Houston banking institution. Mr. Lenig served as a director of Fischer Imaging Corporation, a public company engaged in mammography, radiology and associated healthcare device manufacturing prior to the sale of its principal intellectual property positions in late 2005. Mr. Lenig currently serves as a director and chairman of the audit committee of Deep Marine Technology, Inc., a privately held oil and gas services company. Mr. Lenig received a B.B.A. in Accounting from the University of Houston and is currently a member of the University's Advisory Counsel to the Dean of the College of Natural Sciences and Mathematics.

Vacancies on the Board of Directors

Currently, vacancies on the Board of Directors may be filled only by at least a two-thirds majority of the directors then in office. A director elected by the Board of Directors to fill a vacancy, including a vacancy created by an increase in the number of directors, shall serve until the next annual meeting of stockholders and the director's successor is elected and qualified.

Independence of the Board of Directors

As required under applicable Nasdaq Marketplace Rules, a majority of the members of a listed company's board of directors must qualify as "independent," as affirmatively determined by the board of directors. Our

Board of Directors consults with our counsel to ensure that the Board of Directors' determinations are consistent with all relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in pertinent Nasdaq Marketplace Rules, as in effect time to time.

Consistent with these considerations, after review of all relevant transactions and relationships between each director or any of his family members, and our senior management, our independent registered public accounting firm and us, the Board of Directors affirmatively has determined that all of the directors are independent directors within the meaning of the applicable Nasdaq Marketplace Rules, except for Dr. Stylli, our Chief Executive Officer, and Dr. Cantor, our Chief Scientific Officer.

As required under applicable Nasdaq Marketplace Rules, in 2006 our independent directors met in regularly scheduled executive sessions at which only independent directors were present.

Meetings of the Board of Directors

The Board of Directors met thirteen times during 2006. Each director attended 75% or more of the aggregate of the meetings of the Board of Directors and of the committees on which he served, held during the period for which he was a director or committee member.

Attendance at Annual Meetings

We have adopted a policy encouraging our directors and nominees for directors to attend our annual meetings of stockholders. The following directors attended our annual meeting in 2006: Dr. Afting, Dr. Cantor, Dr. Hixson, Dr. Lindsay, John E. Lucas, and Dr. Stylli.

Code of Business Conduct and Ethics

We have adopted a Code of Business Conduct and Ethics that applies to all of our officers, directors and employees. The Code of Business Conduct and Ethics is available in the Corporate Governance section under "Investors" on our website at www.sequenom.com. If we make any substantive amendments to the Code of Business Conduct and Ethics or grant any waiver from a provision of the Code to the principal executive, financial or accounting officers, we will promptly disclose the nature of the amendment or waiver on our website.

Communication with the Board of Directors

Persons interested in communicating with our Board of Directors regarding their concerns or issues may send written correspondence to the Board of Directors in care of the Secretary at Sequenom, Inc., 3595 John Hopkins Court, San Diego, California 92121 or by email at "board@sequenom.com". The Secretary will screen communications for spam, junk mail, mass mailings, product complaints, product inquiries, new product suggestions, resumes, job inquiries, surveys, business solicitations and advertisements, as well as unduly hostile, threatening, illegal, unsuitable, frivolous, patently offensive or otherwise inappropriate material before forwarding to the Board of Directors. The process regarding security holder communications with the Board of Directors may be found under the Investors section on our website at *www.sequenom.com.*

Board Committees

The Board of Directors has three standing committees: an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. The following table provides current and former membership and meeting information for 2006 for each of the committees:

Name	Audit	Compensation	Nominating and Corporate Governance
Ernst-Gunter Afting	X		X*
Charles R. Cantor			
Patrick G. Enright(1)		X	
Paul Hawran(2)	X		
Harry F. Hixson, Jr.	X*	X	X
Larry E. Lenig(3)			X
Ronald M. Lindsay	X	X*	
John E. Lucas(4)	X	X	X
Lawrence R. Moreau(5)	X		
Harry Stylli			
Total meetings in 2006	8	7	3

* Current Committee Chair

(1) Mr. Enright was elected to the Board of Directors and appointed to the Compensation Committee in June 2006.

(2) Mr. Hawran was elected to the Board of Directors and appointed chairman of the Audit Committee in August 2006. Mr. Hawran resigned from the Board of Directors in February 2007.

(3) Mr. Lenig was elected to the Board of Directors and appointed to the Nominating and Corporate Governance Committee in June 2006. He is not standing for re-election in 2007, and his term will expire at the annual meeting.

(4) Mr. Lucas resigned from the Board of Directors in June 2006.

(5) Mr. Moreau did not stand for re-election in 2006. His term expired on May 31, 2006.

Below is a description of each committee of the Board of Directors. Each of the committees has authority to engage legal counsel or other experts or consultants, as it deems appropriate to carry out its responsibilities. The Board of Directors has determined that each current member of each committee meets the applicable rules and regulations regarding independence and that each member is free of any relationship that would interfere with his individual exercise of independent judgment.

Nominating and Corporate Governance Committee

Three directors comprise the Nominating and Corporate Governance Committee: Dr. Afting (chair), Dr. Hixson and Mr. Lenig. The Nominating and Corporate Governance Committee is responsible for identifying, reviewing and evaluating candidates to serve as directors consistent with criteria approved by the Board of Directors, reviewing and evaluating incumbent directors; selecting candidates for election to the board of directors; making recommendations to the Board of Directors regarding the membership of the committees of the Board of Directors; assessing the performance of management and the Board of Directors, and overseeing corporate governance matters. Our Nominating and Corporate Governance Committee charter may be found in the Corporate Governance section under "Investors" on our website at *www.sequenom.com*. All members of the Nominating and Corporate Governance Committee are independent (as currently defined in Nasdaq Marketplace Rule 4200(a)(15)).

The Nominating and Corporate Governance Committee believes that candidates for director should have certain minimum qualifications, including being able to read and understand basic financial statements, being over 21 years of age and having the highest personal integrity and ethics. The Committee also considers such

factors as possessing relevant expertise upon which to be able to offer advice and guidance to management, having sufficient time to devote to our affairs, demonstrated excellence in his or her field, having the ability to exercise sound business judgment and having the commitment to rigorously represent the long-term interests of our stockholders. The Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of the Board of Directors, our operating requirements and the long-term interests of stockholders. In conducting this assessment, the Committee considers diversity, age, skills, and such other factors as it deems appropriate given the current needs of the Board of Directors to maintain a balance of knowledge, experience and capability. In the case of incumbent directors, the Nominating and Corporate Governance Committee reviews such directors' overall service during their term, including the number of meetings attended, level of participation, quality of performance, and any other relationships and transactions that might impair such directors' independence. In the case of new director candidates, the Committee also determines whether the nominee must be independent under applicable Nasdaq and SEC rules. The Committee uses its network of contacts to compile a list of potential candidates, but may also engage, if it deems appropriate, a professional search firm. The Committee conducts any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board of Directors. The Committee meets to discuss and consider such candidates' qualifications and then selects a nominee by majority vote. During 2006, the Nominating and Corporate Governance Committee did not pay a fee to any third party to assist in the process of identifying or evaluating director candidates. The Committee may engage a third party to assist in this process in 2007. To date, the Nominating and Corporate Governance Committee has not received any director nominee from a stockholder or stockholders other than the individuals designated by ComVest and Pequot in connection with the closing of our private placement of common stock in June 2006. Pursuant to the purchase agreement for our 2006 private placement, each purchaser that holds at least 10% of outstanding shares of common stock has the right to nominate one individual for election to the Board of Directors provided such nominee has been approved by the Nominating and Corporate Governance Committee and complies with any relevant Nasdaq rule.

The Nominating and Corporate Governance Committee will consider director candidates recommended by stockholders. The Committee does not intend to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether the candidate was recommended by a stockholder. Stockholders who wish to recommend individuals for consideration by the Nominating and Corporate Governance Committee to become nominees for election to the Board of Directors may do so by delivering a written recommendation to the Nominating and Corporate Governance Committee at the following address: Sequenom, Inc., 3595 John Hopkins Court, San Diego, California 92121. Such recommendations must be received by the Nominating and Corporate Governance Committee at least 120 days prior to the anniversary date of the mailing of our proxy statement for the last annual meeting of stockholders. Submissions must include the full name of the proposed nominee, a description of the proposed nominee's business experience for at least the previous five years, complete biographical information, a description of the proposed nominee's qualifications as a director and a representation that the nominating stockholder is a beneficial or record owner of our stock. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected.

Audit Committee

Three directors comprise the Audit Committee: Dr. Hixson (chair), Dr. Afting and Dr. Lindsay. The Audit Committee oversees our corporate accounting and financial reporting process. The Audit Committee evaluates the performance and assesses the qualifications of the independent registered public accounting firm that audits our financial statements; determines and approves the engagement of the independent registered public accounting firm; determines whether to retain or terminate the existing independent registered public accounting firm or to appoint and engage a new independent registered public accounting firm; reviews and approves the retention of the independent registered public accounting firm to perform any proposed permissible non-audit services; monitors the rotation of partners of the independent registered public accounting firm on our audit engagement team as required by law; confers with management and the independent registered public accounting

firm regarding the effectiveness of internal controls over financial reporting; establishes procedures, as required under applicable law, for the receipt, retention and treatment of complaints regarding accounting, internal accounting controls or auditing matters and the confidential and anonymous submission by employees of concerns regarding questionable accounting or auditing matters; reviews and approves or rejects related-person transactions; reviews the financial statements to be included in our Annual Report on Form 10-K; and discusses with management and the independent registered public accounting firm the results of the annual audit and our quarterly financial statements. The Audit Committee has adopted a written charter that may be found in the Corporate Governance section under "Investors" on our website at *www.sequenom.com.*

All communications directed to the Audit Committee in accordance with the Open Door Policy for Reporting Complaints that relate to questionable accounting or auditing matters involving the Company will be promptly and directly forwarded to the Audit Committee. The Open Door Policy for Reporting Complaints is available in the Corporate Governance section under "Investors" on our website at *www.sequenom.com.*

The Board of Directors annually reviews the Nasdaq listing standards definition of independence for Audit Committee members and has determined that all members of the Audit Committee are independent (as independence is currently defined in Nasdaq Marketplace Rule 4200(a)(15) and SEC Rule 10A-3). The Board of Directors has determined that Dr. Hixson qualifies as an "audit committee financial expert," as defined in applicable SEC rules. The Board of Directors made a qualitative assessment of Dr. Hixson's level of knowledge and experience based on a number of factors, including his formal education and experience as a chief executive officer or other senior executive officer for several companies.

REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS*

The Audit Committee of the Board of Directors is currently comprised of Dr. Hixson (chair), Dr. Afting and Dr. Lindsay. Each member of the Audit Committee is an independent director as determined by the Board of Directors based on applicable Nasdaq rules. Each member of the Audit Committee also satisfies the SEC additional independence requirements for members of audit committees. The Audit Committee selects the Company's independent registered public accounting firm and submits the selection to the stockholders for ratification. The Audit Committee oversees the Company's financial reporting process on behalf of the Board of Directors and operates under a written charter approved by the Board of Directors. The Committee's function is more fully described in its charter, which may be found in the Corporate Governance section under "Investors" on the Company's website at *www.sequenom.com.*

Management is responsible for the preparation, presentation and integrity of the Company's financial statements, accounting and reporting principles, and the financial reporting process and procedures designed to ensure compliance with accounting standards, applicable laws and regulations, including establishing and maintaining disclosure controls and procedures (as defined in SEC Rule 13a-15(e)), establishing and maintaining internal control over financial reporting (as defined in SEC Rule 13a-15(f)), evaluating the effectiveness of disclosure controls and procedures, evaluating the effectiveness of internal control over financial reporting, and evaluating any change in internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, internal control over financial reporting.

The Company's independent registered public accounting firm is responsible for performing an independent audit of the Company's financial statements in accordance with generally accepted auditing standards and issuing a report thereon. The Company's independent registered public accounting firm understands that they are accountable to the Audit Committee, not the Company's management.

In this context, the Audit Committee has met and held discussions with management and the Company's independent registered public accounting firm, including a discussion of the quality, not just the acceptability, of the accounting principles, the reasonableness of significant judgments, the clarity of disclosures in the financial statements. Management represented to the Audit Committee that the Company's financial statements were prepared in accordance with generally accepted accounting principles, and the Audit Committee has reviewed and discussed the financial statements, including the audited financial statements, with management and the Company's independent registered public accounting firm, including whether there were any off-balance sheet financing transactions or any transactions with related parties. The Audit Committee discussed with the Company's independent auditors matters required to be discussed by the Statement on Auditing Standards No. 61, as amended (AICPA, *Professional Standards* Vol. 1. AU Section 380), as adopted by the Public Company Accounting Oversight Board ("PCAOB") in Rule 3200T.

The Audit Committee has received from the Company's independent accountants the written disclosures and the letter required by Independence Standards Board Standard No. 1 (*Independence Discussions with Audit Committees*). In addition, the Audit Committee discussed with the Company's independent registered public accounting firm that firm's independence from the Company and its management, and the results of their examinations. The Audit Committee has also concluded that Ernst & Young LLP's provision of audit and non-audit services to the Company and its affiliates is compatible with Ernst & Young LLP's independence.

Based on the Audit Committee's discussion with management and the Company's independent registered public accounting firm and the Audit Committee's review of the representation of management and the report of

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* The material in this report is not "soliciting material," is not deemed "filed" with the SEC and is not to be incorporated by reference in any filing of the Company under the Securities Act of 1933, as amended (the "1933 Act"), or the Securities Exchange Act of 1934, as amended (the "1934 Act"), whether made before or after the date of this proxy statement and without regard to any general incorporation language therein.

the Company's independent registered public accounting firm to the Audit Committee, the Audit Committee recommended that the Board of Directors include the audited financial statements in the Company's Annual Report on Form 10-K for the year ended December 31, 2006 filed with the SEC. The Committee has selected Ernst & Young LLP as the Company's independent registered public accounting firm and recommended that its selection be submitted to the stockholders for ratification.

Audit Committee

Harry F. Hixson, Jr.
Ernst-Günter Afting
Ronald M. Lindsay

Compensation Committee

Three directors comprise the Compensation Committee: Dr. Lindsay (chair), Dr. Hixson and Mr. Enright. The Compensation Committee establishes our executive compensation philosophy and reviews and approves our overall compensation strategy and policies. All members of the Compensation Committee are independent (as currently defined in Nasdaq Marketplace Rule 4200(a)(15)). The Compensation Committee's charter may be found in the Corporate Governance section under "Investors" on our website at *www.sequenom.com*. The functions of the Compensation Committee include, among other things:

- reviewing and approving the compensation and other terms of employment of our Chief Executive Officer;
- reviewing and approving the compensation and other terms of employment of the other executive officers;
- reviewing and approving corporate performance goals and objectives relevant to the compensation of our executive officers and other senior management; and
- administration of our equity incentive and stock purchase plans and other benefit plans and programs.

Commencing this year, the Compensation Committee also began to review with management the Company's Compensation Discussion and Analysis and to consider whether to recommend that it be included in proxy statements and other filings.

Compensation Committee Processes and Procedures

Typically, the Compensation Committee meets in person in connection with regularly scheduled meetings of the Board of Directors at least four times annually and holds telephonic meetings with greater frequency if necessary. The Compensation Committee met seven times during 2006. The agenda for each meeting is usually developed by the Chair of the Compensation Committee, in consultation with our Chief Executive Officer. The Compensation Committee meets regularly in executive session. However, from time to time, various members of management and other employees as well as outside advisors or consultants may be invited by the Compensation Committee to make presentations, provide financial or other background information or advice or otherwise participate in Compensation Committee meetings. The Chief Executive Officer may not participate in or be present during any deliberations or determinations of the Compensation Committee regarding his compensation or individual performance objectives. The charter of the Compensation Committee grants the Compensation Committee full access to all books, records, facilities and personnel of the Company, as well as authority to obtain, at the expense of the Company, advice and assistance from internal and external legal, accounting or other advisors and consultants and other external resources that the Compensation Committee considers necessary or appropriate in the performance of its duties. In particular, the Compensation Committee has the sole authority to retain compensation consultants to assist in its evaluation of chief executive officer and other senior executive compensation, including the authority to approve the consultant's reasonable fees and other retention terms.

Under its charter, each member of the Compensation Committee must be a "non-employee director" within the meaning of Rule 16b-3 under the 1934 Act and an "outside director" within the meaning of Section 162(m) of the Internal Revenue Code (the "Code"), and each of Dr. Lindsay, Dr. Hixson and Mr. Enright meets these requirements. Under its charter, the Committee is responsible for establishing the Company's compensation policies, plans and programs for all executive officers, for overseeing the overall compensation strategy for the Company and for administering the Company's benefit plans. The Committee provides guidance with respect to the purpose and principles behind the company's compensation decisions and overall compensation philosophy and objectives, oversees our compensation policies, plans and programs, and reviews and determines executive officer compensation. The Committee annually evaluates the performance and determines the compensation of the Chief Executive Officer and the other executive officers of the Company based upon a mix of factors including the achievement of corporate goals, individual performance and comparisons with other biotechnology companies. The Chief Executive Officer was not present during the voting or deliberations by the Committee on his compensation

Historically, the Compensation Committee has typically made adjustments to annual compensation, determined bonus and equity awards and set new performance objectives consistent with the performance goals established by the Board of Directors at one or more meetings held during the first quarter of the year. However, the Compensation Committee also considers matters related to individual compensation, such as compensation for new executive hires, as well as high-level strategic issues, such as the efficacy of the Company's compensation strategy, potential modifications to that strategy and new trends, plans or approaches to compensation, at various meetings throughout the year. Generally, each year our Board of Directors with input from our executive officers, defines measurable performance goals for the Company. Based upon these performance goals, our Compensation Committee, with input from our Board of Directors, weights each goal in view of each goal's overall importance to the Company and establishes incentive compensation parameters that reward achievement of those goals. The Compensation Committee's process comprises two related elements: the determination of specific individual compensation levels and the establishment of performance objectives for the Company and the executives for the current year. For executives other than the Chief Executive Officer, the Compensation Committee solicits and considers evaluations and recommendations submitted to the Committee by the Chief Executive Officer. In the case of the Chief Executive Officer, the evaluation of his performance is conducted by the Compensation Committee, which determines any adjustments to his compensation as well as awards to be granted. For all executives, as part of its deliberations, the Compensation Committee may review and consider, as appropriate, materials such as financial reports and projections, operational data, tax and accounting information, tally sheets that set forth the total compensation that may become payable to executives in various hypothetical scenarios, executive stock ownership information, company stock performance data, analyses of current Company-wide compensation levels, and recommendations from any compensation consultant that the Compensation Committee may have retained, including analyses of executive compensation paid at other companies identified by the consultant.

The specific determinations of the Compensation Committee with respect to executive compensation for fiscal year 2006 as well as additional information regarding the role of the Compensation Committee and its processes and procedures are described in greater detail in the Compensation Discussion and Analysis section of this proxy statement.

Compensation Committee Interlocks and Insider Participation

As indicated above, the Compensation Committee consists of Dr. Lindsay, Dr. Hixson and Mr. Enright. No member of the Compensation Committee has ever been our officer or employee. None of our executive officers currently serves, or has served during the last completed fiscal year, on the compensation committee or board of directors of any other entity that has one or more executive officers serving as a member of our Board of Directors or Compensation Committee.

COMPENSATION COMMITTEE REPORT *

The Compensation Committee has reviewed and discussed with management the Compensation Discussion and Analysis contained in this proxy statement. Based on the review and discussion, the Compensation Committee has recommended to our Board of Directors that the Compensation Discussion and Analysis be included in this proxy statement and incorporated into our Annual Report on Form 10-K for the fiscal year ended December 31, 2006, as amended.

Compensation Committee

Ronald M. Lindsay
Harry F. Hixson, Jr.
Patrick G. Enright

* The material in this report is not "soliciting material," is not deemed "filed" with the SEC and is not to be incorporated by reference in any filing of the Company under the 1933 Act or the 1934 Act, whether made before or after the date of this proxy statement and without regard to any general incorporation language therein.

PROPOSAL 2

RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of the Board of Directors has selected Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2007 and has further directed that management submit the selection of our independent registered public accounting firm for ratification by the stockholders at the Annual Meeting. Ernst & Young LLP has audited our financial statements since 1997. Representatives of Ernst & Young LLP are expected to be present at the Annual Meeting. They will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Neither our Bylaws nor our other governing documents or law require stockholder ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm. However, our Audit Committee is submitting the selection of Ernst & Young LLP to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the Audit Committee will reconsider whether or not to retain that firm. Even if the selection is ratified, the Audit Committee in its discretion may direct the appointment of a different independent registered public accounting firm at any time during the year if they determine that such a change would be in our best interests or in the best interests of our stockholders.

The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote at the annual meeting will be required to ratify the selection of Ernst & Young LLP. Abstentions will be counted toward the tabulation of votes cast on proposals presented to the stockholders and will have the same effect as negative votes. Broker non-votes are counted towards a quorum, but are not counted for any purpose in determining whether this matter has been approved.

Principal Accountant Fees and Services

The following table represents aggregate fees billed to us for fiscal years ended December 31, 2006 and 2005, by Ernst & Young LLP, our principal independent registered public accounting firm.

	2006 Actual Fees	2005 Actual Fees
Audit Fees(1)		
Audit of consolidated financial statements, including subsidiary statutory audits and services associated with attestation of management's assertion over internal controls required by Section 404 of Sarbanes Oxley Act	$582,885	$ 842,232
Timely quarterly reviews	85,610	82,207
SEC filings, including comfort letters, consents and comment letters	12,034	—
Accounting consultations on matters addressed during the audit or interim reviews	13,020	—
Total Audit Fees	$693,549	$ 924,439
Audit Related Fees(2)		
Employee benefit plans	—	—
General assistance with implementation of the requirements of SEC rules or listing standards promulgated pursuant to the Sarbanes Oxley Act	13,759	1,500
Accounting consultation in connection with acquisitions	—	—
Total Audit Related Fees	$ 13,759	1,500
Tax Fees(2)		
Tax compliance services	$ 76,175	93,066
Tax Planning	—	—
Total Tax Fees	$ 76,175	93,066
Total Fees	$783,483	$1,019,005

(1) Includes fees and expenses related to the fiscal year audit and interim reviews, notwithstanding when the fees and expenses were billed or when the services were rendered. Fiscal year 2006 audit fees are preliminary, and subject to final settlement based upon actual hours incurred versus budgeted.

(2) Includes fees and expenses for services rendered from January through December of the fiscal year, notwithstanding when the fees and expenses were billed. Fiscal year 2006 tax compliance fees are preliminary, and subject to final settlement based upon actual hours incurred versus budgeted.

All fees described above were approved by the audit committee.

During the fiscal year ended December 31, 2006, none of the total hours expended on our financial audit by Ernst & Young LLP were provided by persons other than Ernst & Young LLP's full-time permanent employees.

Pre-Approval Policies and Procedures.

The Audit Committee pre-approves all audit and non-audit services rendered by our independent registered public accounting firm. The Audit Committee generally pre-approves specified services up to specified amounts. Under its charter, the Audit Committee may delegate the pre-approval of services to one or more of its members. Any such pre-approval must be reported to the full Audit Committee at its next meeting.

The Audit Committee has determined that the rendering of the services other than audit services by Ernst & Young LLP is compatible with maintaining the principal accountant's independence.

THE BOARD OF DIRECTORS RECOMMENDS
A VOTE IN FAVOR OF PROPOSAL 2.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the beneficial ownership of our common stock as of April 30, 2007 by: (i) each director and nominee for director; (ii) each of the named executive officers listed in the Summary Compensation Table; (iii) all of our executive officers and directors as a group; and (iv) each person, or group of affiliated persons, known by us to beneficially own more than five percent of our common stock.

Beneficial ownership has been determined in accordance with Rule 13d-3 under the 1934 Act. Under this rule, certain shares may be deemed to be beneficially owned by more than one person (if, for example, persons share the power to vote or the power to dispose of the shares). Shares are deemed to be beneficially owned by a person if the person has the right to acquire shares (for example, upon exercise of an option or warrant) within 60 days of the date of the information provided. In computing the percentage ownership of any person, the number of shares is deemed to include the number of shares beneficially owned by such person (and only such person) by reason of such acquisition rights. As a result, the percentage of outstanding shares of any person as shown in the following table does not necessarily reflect the person's actual voting power at any particular date.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Sequenom, Inc., 3595 John Hopkins Court, San Diego, California 92121.

	Beneficial Ownership(1)	
Beneficial Owner	**Number of Shares**	**Percent of Total**
ComVest Investment Partners II LLC(2) One North Clematis Street, Suite 300 West Palm Beach, Florida 33401	8,057,374	18.33%
Pequot Private Equity Fund IV, L.P.(3) c/o Pequot Capital Management, Inc. 500 Nyala Road, Westport, Connecticut 06880	7,333,333	16.62%
LB I Group Inc.(4) c/o Lehman Brothers Inc., 399 Park Avenue, Ninth Floor New York, New York 10022	6,272,726	14.64%
Siemens Venture Capital GMBH(5) 801 Boylston Street, 5th Floor Boston, Massachusetts 02116	3,878,787	9.33%
Stephens Investment Management, LLC One Sansome Street, Suite 2900 San Francisco, CA 94104	2,212,123	5.5%
Directors, Nominees and Executive Officers		
Harry Stylli, Ph.D.(6)	532,493	1.31%
Charles R. Cantor, Ph.D.(7)	299,678	*
Clarke Neumann(8)	56,102	*
John Sharp(9)	12,333	*
Ernst-Günter Afting, Ph.D., M.D.(10)	73,333	*
Harry F. Hixson, Jr., Ph.D.(11)	31,667	*
Ronald M. Lindsay, Ph.D.(12)	33,334	*
Patrick Enright	14,105	*
Paul Hawran	10,000	—
Larry F. Lenig, Jr.(13)	8,073,939	18.37%
Elizabeth A. Dragon(14)	27,718	*
All directors and executive officers as a group (11 persons)(15)	9,164,702	20.48%

* Less than one percent.

(1) This table is based upon information supplied by officers, directors and principal stockholders and Schedules 13D and 13G filed with the SEC. To our knowledge, except as indicated in the footnotes to this table and pursuant to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them. Applicable percentages are based on 40,127,154 shares outstanding on April 30, 2007, adjusted as required by SEC rules.

(2) Includes 3,818,181 shares of our common stock issuable pursuant to warrants exercisable within 60 days of April 30, 2007 by ComVest Investment Partners II LLC. ComVest Investment Partners II LLC, a Delaware limited liability company ("ComVest") is a private investment company. The managing member of ComVest is ComVest II Partners LLC, a Delaware limited liability company ("ComVest II Partners"), the managing member of which is ComVest Group Holdings, LLC, a Delaware limited liability company ("CGH"). Michael Falk ("Falk") is the Chairman and principal member of CGH. Robert Priddy ("Priddy") is a member of ComVest II Partners. Falk and Priddy, by virtue of their status as managing members of ComVest II Partners (the managing member of ComVest) and as the principal members of ComVest and ComVest II Partners, may be deemed to have indirect beneficial ownership of the shares of common stock beneficially owned by ComVest. However, Falk and Priddy disclaim any beneficial ownership of such shares. Larry Lenig, an employee of ComVest, is one of our directors.

(3) Includes 4,000,000 shares of our common stock issuable pursuant to warrants exercisable within 60 days of April 30, 2007 by Pequot Private Equity Fund IV, L.P. Excludes 771 shares of common stock held by Mr. Enright directly. Pequot Capital Management, Inc. holds voting and investment power for all shares held by Pequot Private Equity Fund IV, L.P. (the "Fund"). Mr. Enright, a member of our Board of Directors, is a Managing Director of Longitude Capital, Inc., a consultant to Pequot Capital Management, Inc. and a member of the General Partner of the Fund. Mr. Enright may be deemed to beneficially own the securities held of record by the Fund. Mr. Enright disclaims beneficial ownership of the shares held by the Fund except to the extent of his pecuniary interest.

(4) Includes 2,727,272 shares of our common stock issuable pursuant to warrants exercisable within 60 days of April 30, 2007 by LB I Group Inc. LB I Group Inc. is a wholly owned subsidiary of Lehman Brothers Inc., a registered broker-dealer. Lehman Brothers Inc. is a wholly owned subsidiary of Lehman Brothers Holdings Inc., a public reporting company.

(5) Includes 1,454,545 shares of our common stock issuable pursuant to warrants exercisable within 60 days of April 30, 2007 by Siemens Venture Capital GmbH. Siemens Venture Capital GmbH, a company with limited liability organized under the laws of the Federal Republic of Germany, is a wholly owned subsidiary of Siemens Aktiengesellschaft, a public reporting stock corporation organized under the laws of the Federal Republic of Germany.

(6) Includes 443,720 shares of common stock that Mr. Stylli has the right to acquire from us upon the exercise of outstanding stock options within 60 days after April 30, 2007. Also includes 22,807 restricted shares of common stock that are subject to a repurchase option in favor of the Company in the event Dr. Stylli's employment is terminated prior to January 17, 2008.

(7) Includes 143,846 shares of common stock held of record by trusts related to Dr. Cantor and beneficially owned by Dr. Cantor and 155,832 shares of common stock that Dr. Cantor has the right to acquire from us upon the exercise of outstanding stock options within 60 days after April 30, 2007. Also includes 6,444 restricted shares of common stock that are subject to a repurchase option in favor of the Company in the event Dr. Cantor's employment is terminated prior to January 17, 2008.

(8) Includes 43,726 shares of common stock that Mr. Neumann has the right to acquire from us upon the exercise of outstanding stock options within 60 days after April 30, 2007. Also includes 5,044 restricted shares of common stock that are subject to a repurchase option in favor of the Company in the event Mr. Neumann's employment is terminated prior to January 17, 2008.

(9) Includes 12,333 shares of common stock that Mr. Sharp has the right to acquire from us upon the exercise of outstanding stock options within 60 days after April 30, 2007. Excludes 3,219 shares of restricted common stock repurchased by the Company upon Mr. Sharp's departure in April 2007.

(10) Includes 38,334 shares of common stock that Dr. Afting has the right to acquire from us upon the exercise of outstanding stock options within 60 days after April 30, 2007.

(11) Includes 31,667 shares of common stock that Dr. Hixson has the right to acquire from us upon the exercise of outstanding stock options within 60 days after April 30, 2007.
(12) Includes 28,334 shares of common stock that Dr. Lindsay has the right to acquire from us upon the exercise of outstanding stock options within 60 days after April 30, 2007.
(13) Includes 4,239,193 shares of common stock owned by ComVest and includes 3,818,181 shares of our common stock issuable pursuant to warrants exercisable within 60 days of April 30, 2007 by ComVest. Mr. Lenig disclaims beneficial ownership of these shares except to the extent of his pecuniary interest in ComVest entities.
(14) Includes 24,827 shares of common stock that Dr. Dragon has the right to acquire from us upon the exercise of outstanding stock options within 60 days of April 30, 2007. Also includes 2,891 restricted shares of common stock that are subject to a repurchase option in favor of the Company in the event Dr. Dragon's employment is terminated prior to January 17, 2008.
(15) Includes the 4,596,954 aggregate shares of common stock referred to in footnotes (6), (7), (8), (9), (10), (11), (12), (13) and (14) that such persons have the right to acquire from us upon the exercise of outstanding options and warrants within 60 days after April 30, 2007.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires our directors and executive officers, and persons who own more than ten percent of a registered class of our equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of our common stock and other equity securities. Our officers, directors and greater than ten percent stockholders are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required, during the fiscal year ended December 31, 2006, all Section 16(a) filing requirements applicable to our officers, directors and greater than ten percent beneficial owners were complied with.

EXECUTIVE COMPENSATION

The following discussion covers the compensation arrangements for the named executive officers identified in the Summary Compensation Table (the "NEOs") and our directors and includes a general discussion and analysis of our executive compensation program as well as a series of tables containing specific compensation information for our NEOs and directors. This discussion contains forward looking statements that are based upon our current executive compensation program, policies and methodologies. We may make changes in this program and these policies and methodologies in the future, and if made, we could have materially different compensation arrangements in the future.

Compensation Discussion and Analysis

Executive compensation philosophy

Our Compensation Committee establishes the executive compensation philosophy for our Company. The Compensation Committee has designed our executive compensation program to help us achieve our goals and objectives, including:

- Aligning our executive compensation with our business objectives;
- Making payments or providing other incentives based on our performance as measured against annual company goals set by our full Board of Directors;
- Attracting, retaining, motivating and rewarding executive officers (including the NEOs) and maintaining a stable management team comprised of individuals with substantial industry experience; and
- Aligning the financial interests of our executives with the long-term financial interests of our shareholders.

To accomplish these goals and objectives, we have created an executive compensation program comprised of three primary elements: base pay, an annual bonus program and a long term incentive program which uses equity awards.

Although it is not our policy or routine practice to enter into employment agreements with executive officers, employment agreements are used from time to time on a case by case basis, to attract and/or to retain executives. We currently maintain employment agreements with three of our NEOs; Dr. Stylli, Dr. Cantor and Mr. Neumann.

Additionally, we have created a change in control severance benefit plan which provides additional benefits for executive officers in the event that there is a change in control of our Company and an executive loses his or her job. Dr. Cantor, Mr. Neumann, Dr. Dragon participate in that plan and, prior to his departure in April 2007, Mr. Sharp also participated in the plan. Dr. Stylli has change in control provisions in his employment contract. We believe that these change in control benefits help us retain executive talent and, in the event of a potential change of control, allow the executives to focus on the potential transaction without concern for their personal near-term financial future. The potential for a participating executive to receive these change in control benefits will expire June 6, 2007, unless a protected termination of the executive occurs before that date. These change in control benefits are discussed in more detail in the "Change in Control Arrangements" section below and in the "Post-Employment Payments" section and table below.

The Compensation Committee's role in the executive compensation process

The Compensation Committee of our Board of Directors is comprised of three independent directors: Dr. Lindsay, Chairman of the Committee; Dr. Hixson; and Mr. Enright. The Committee has responsibilities vested in it by our Board of Directors as set forth in the Charter of the Compensation Committee which may be found in the Corporate Governance section under "Investors" on our website at *www.sequenom.com*. Among its

responsibilities, the Committee provides guidance with respect to the purpose and principles behind the company's compensation decisions and overall compensation philosophy and objectives, and the Committee oversees our compensation policies, plans, and programs, and reviews and determines executive officer compensation.

Our Compensation Committee is actively involved in our executive compensation process. The Committee met seven times during 2006. During these meetings the Committee explored various alternatives to portions of the executive compensation program in addition to its regular duties of monitoring and approving compensation levels, approving the terms of compensation arrangements for new executives, and reviewing corporate goals as they relate to executive compensation. In addition to these meetings, throughout 2006 our Chief Executive Officer, Compensation Committee members, and other members of our Board of Directors were involved in numerous discussions regarding compensation matters. The Compensation Committee maintains a calendar to make sure that selected matters (such as compensation strategy, base pay, variable pay and equity awards) are reviewed on an annual basis. The Compensation Committee did not use the services of an outside compensation consultant in 2006.

With respect to the annual bonus program, our Board of Directors, with input from our executive officers, defines measurable performance goals for the Company each year. Our Compensation Committee considers input from the full Board of Directors, applies weighting to each goal in view of each goals overall importance to the Company and establishes incentive compensation parameters that reward performance goal achievement.

The components of our executive compensation program

Our executive compensation program consists of three main components: base pay; a cash and/or stock based annual incentive program ("annual bonus"); and stock options granted at fair market value to provide longer term incentives through appreciation in our stock. We also provide our executive officers, including NEOs, with the same package of employee benefits that are provided to all full time employees, including such programs as health insurance, group term life and disability insurance, and a discretionary matching contribution to our 401(k) plan, although no matching contributions were made in 2006. From time to time, NEOs may receive additional perquisites, as discussed further below and referenced in the Summary Compensation Table.

We have selected each of the executive compensation components for the following reasons:

- Taken as a whole, the components of the executive compensation program (base pay, annual bonus and equity grants) are comparable to the programs offered by other companies of our size in the life sciences industry; therefore, our program helps us attract new executive talent and retain, motivate, and reward the executives that we currently employ.
- The annual bonus program rewards executives for the satisfaction of Company goals that are established by the full Board of Directors. Compensation under this program directly reflects the Company's satisfaction of corporate objectives and reflects individual overall performance in the opinion of our Chief Executive Officer and the Compensation Committee members. Evaluation of individual overall performance for our Chief Executive Officer is performed solely by the Compensation Committee and in executive session deliberations without the Chief Executive Officer present. Payments under this program, partially paid in restricted stock for 2006, underscores our desire to have our executives focus their efforts on annual and longer-term company goals and to take actions that maximize shareholder value. Our Compensation Committee rewards executives only in the event of satisfactory Company and personal performance.
- Stock option grants to purchase our common stock serve three purposes: first, they are a retention device, as the executive must continue employment with us to vest his or her options and to exercise the options to realize value; second, they align the interests of management with those of our shareholders with the goal of creating long term growth and value for the Company; and third they allow us to attract and recruit new executives.

How the amount of each component of compensation is determined

Base Pay

The Compensation Committee reviews the base salary of each NEO as well as other executives on an annual basis. It is the Compensation Committee's intent to maintain base salary levels for executives within a salary range that has as its midpoint, the average level of pay for executives with similar duties at similarly sized companies in the life sciences industry. We maintain salary ranges for each executive position.

Our human resources department provides our Compensation Committee and our Chief Executive Officer with proposed salary ranges for each executive position as well as a summary of results from the AON Consulting/Radford Division 2005 Biotechnology Survey (the Radford Biotechnology Survey) for nationwide employers with between 50 and 149 employees.

Our Chief Executive Officer provides the Compensation Committee with proposals for base pay increases for the NEOs (as well as other executives). All proposed NEO base pay levels provided by our Chief Executive Officer to the Committee during 2006 were within our salary range for each position. The Compensation Committee reviews the Chief Executive Officer's proposals regarding NEO compensation as well as information provided to the Committee by our human resources department regarding base pay for chief executive officers. The Committee establishes the base pay for our NEOs and our Chief Executive Officer. When the Committee is discussing or evaluating compensation for our Chief Executive Officer, the Compensation Committee meets in executive session without our Chief Executive Officer present.

When granting base pay increases to the NEOs, the Compensation Committee focuses on various factors, including individual and corporate performance, the competitive market for the particular position, levels of responsibility, prior experience, breadth of industry knowledge and the relative pay for the position in the marketplace (as evidenced by the Radford Biotechnology Survey). Material increases or decreases in base pay are related to individual performance, internal pay equity, and survey information. Amounts realized in a prior year from annual bonuses or equity awards are not a factor in determining current year base pay increases.

Annual Bonus

At the beginning of 2006, our full Board of Directors, with input provided by our executive officers, established our Company goals for the year. The Compensation Committee then reviewed and considered a proposed Company-wide (including NEOs) bonus program in view of the Company goals, including proposed weighting of the goals for annual bonus achievement. In March 2006, the Compensation Committee reviewed additional information that it had requested regarding the proposed bonus program. The Compensation Committee deferred further action or approval until after the closing of the then pending private placement of common stock which eventually closed in June 2006. Due to the timing of our June 2006 private placement, decisions with respect to the bonus program (including the amount of the bonus pool to be allocated for potential payment in the event that Company goals were met) were deferred until the third quarter of 2006.

The goals for 2006 included:

- The completion of a round of corporate financing;
- A stated percentage increase in Company-wide revenue, as well as specific revenue increases in certain lines of business;
- A stated percentage improvement in gross margin, with targeted areas of improvement;
- New product launches;
- Creation of strategic partnership agreements; and
- Specified research and development initiatives.

Although our Board of Directors and our Compensation Committee have the discretion to make adjustments to our Company goals during the year, they generally believe that once our Company goals are established, they should not be changed. However, goals may change from time to time depending upon unforeseen and/or changed circumstances and in consideration of the best interests of the Company and its shareholders. The Company goals were not changed during 2006.

We maintain target levels for annual bonus awards. The Chief Executive Officer recommended for 2006 a target level award for the NEOs who reported to him, and those target levels were reviewed and approved by our Compensation Committee. The target level for annual bonus awards is determined by industry data (as set forth in the Radford Biotechnology Survey) and the value of the particular NEO to our Company as a whole and to our Company's key business initiatives. The target level for the annual bonus award for our Chief Executive Officer is specified in his employment contract.

If the established Company goals are attained, our Compensation Committee determines whether our Chief Executive Officer, our other NEOs and our other executive officers have each individually performed satisfactorily to warrant a bonus payment for the year. Our Chief Executive Officer proposes to the Compensation Committee individual annual bonus awards for the NEOs who report to him, as well as our other executives. Our Compensation Committee solely determines our Chief Executive Officer's annual bonus.

For 2006, the Compensation Committee determined that our Company goals were satisfied and that individual executive performance warranted bonuses and authorized payment of annual bonuses to our employees including NEOs. The following is a summary of the annual bonus, stated as a percentage of base pay, granted to each NEO:

Dr. Stylli	50%
Mr. Sharp	20%
Dr. Cantor	25%
Mr. Neumann	25%
Dr. Dragon	20%

For 2006, our Compensation Committee authorized the bonus awards for NEOs to be allocated between cash and restricted stock (with a one year cliff vesting period) in the following proportions: Chief Executive Officer—50% cash and 50% restricted stock; all other NEOs—60% cash and 40% restricted stock. The Compensation Committee decided to pay part of the annual bonus in restricted stock to preserve some of the Company's cash and for the inherent retention value of restricted stock due to the vesting provision. The restricted stock portion of the bonus was awarded in January 2007, and the cash portion of the bonus was paid in February 2007. The annual bonus payment to Dr. Dragon was pro-rated because she began employment with the Company in May 2006. Amounts realized in a prior year from annual bonuses or equity awards are not a factor in determining current year bonus targets. We have not adopted a policy regarding the repayment of annual bonus amounts by the NEOs in the event that a restatement of our financial statements adversely impacts us.

Equity Grants

Other than awards of restricted stock as part of the annual bonus awards (as discussed in the Annual Bonus section above), our equity grants during 2006 were in the form of Incentive Stock Options (ISOs), which are designed to qualify under Internal Revenue Code Section 422, and to the extent that those grants exceed the ISO limitations, non-qualified stock options. All of the options granted in 2006 were valued at fair market value as of the date of grant. The grants to all NEOs, except Dr. Dragon, vest on a monthly basis over four years; Dr. Dragon's grant was part of her offer and acceptance of employment, and vests 25% after one year from the grant date (her employment start date) and the remaining 75% vests on a monthly basis after that time for the next 36 months.

In connection with the award of equity grants, our Chief Executive Officer provided the Compensation Committee with an analysis of the Radford Biotechnology Survey information provided by our human resources department and a proposal for equity grants for the NEOs that report to him. The Compensation Committee reviewed our Chief Executive Officer's proposal and also reviewed information provided by our human resources department regarding grants made to chief executive officers in the Radford Biotechnology Survey. The Compensation Committee reviewed and approved the proposed grants for the NEOs and also approved a grant for our Chief Executive Officer. Amounts realized in a prior year from annual bonuses or equity awards are not a factor in determining current year equity awards.

We do not time the granting of our options with any favorable or unfavorable news relating to the Company. Proximity of any awards to an earnings announcement, market event or other event related to us is purely coincidental.

We do not currently maintain stock ownership guidelines for NEOs, other executives, or Board members. We do maintain an insider trading policy that prohibits such individuals from short selling our stock, and although currently we do not prohibit the use of hedging instruments, we require that such individuals inform us of their use and we reserve the right to restrict or prohibit such use. During 2006, the use of a hedging instrument was not reported to us.

Other Compensation

Dr. Stylli, our Chief Executive Officer receives an additional term life and disability insurance benefit as provided under his employment agreement, and Dr. Stylli and Dr. Cantor each receive an additional medical expense reimbursement benefit. Dr. Dragon received a relocation expense reimbursement benefit and related tax gross-up benefit in connection with her hiring during 2006. All of the NEOs receive life and disability insurance benefits under the programs that are available to all employees. The additional compensation discussed under this section is shown in the "All Other Compensation" column of the Summary Compensation Table.

Change In Control Arrangements

We maintain a "Change in Control Severance Benefit Plan", which was effective on April 28, 2005. This Plan provides for severance payments to selected individuals, some of which are NEOs, in the event that a "Change in Control" occurs and the individual is terminated "without cause" or resigns for "good reason" as defined in the Plan. While Dr. Stylli is not a participant in the Plan, Dr. Stylli has change in control protection as set forth in his employment agreement. We consider the Plan, as well as Dr. Stylli's change in control protection, to have been triggered with the closing of our private placement of common stock on June 6, 2006. This means that our NEOs, including Dr. Stylli, would each be entitled to certain change in control benefits if their employment was terminated by us without cause or by the NEO for good reason, before June 6, 2007. Benefits under the Plan and under Dr. Stylli's employment agreement are discussed in the "Post-Employment Payments" section below.

Policy regarding tax deductibility of executive compensation

We do not currently have a policy regarding the limitation of executive pay to amounts that would be deductible under Internal Revenue Code Section 162(m).

Deferred Compensation Plan

In April 2007, the Compensation Committee recommended to our Board of Directors and our Board of Directors approved a Deferred Compensation Plan that will allow selected eligible executives, including our NEOs, to defer receipt of their salary and cash bonus, and directors to defer their cash retainer and meeting fees, into bookkeeping accounts that permit the participants to select from a range of phantom investment alternatives

that mirror the gains and losses of several different investment alternatives, including our common stock. Under the terms of the plan, participants will be permitted to defer up to 100% of their annual salary, bonus or director fees until a specified date, termination of service or a specified year following termination of service, as elected by the participant at the time of deferral. Additionally, under the terms of the plan, participants will be permitted to defer restricted stock unit awards granted under our equity incentive plan. We are not required to make any contributions to the plan, nor do we pay the expenses of the plan other than the expenses incurred in creating the plan. Participants have our unsecured contractual commitment to pay the amount due under the plan, which remains subject to the claims of our general creditors.

Summary Compensation Table

The following table provides information regarding the compensation earned by our NEOs during the fiscal year ended December 31, 2006.

Name and Principal Position	Year	Salary ($)	Option Awards ($)(3)	Non-Equity Incentive Plan Compensation ($)(4)	All Other Compensation ($)	Total ($)
Harry Stylli ..... Chief Executive Officer	2006	420,000	526,058	210,000(5)	15,959(10)	1,172,017
John Sharp(1) ..... Former Principal Financial Officer	2006	176,438	11,648	37,050(6)	651(11)	225,787
Charles Cantor ..... Chief Scientific Officer	2006	294,480	50,081	74,160(7)	3,490(12)	422,211
Elizabeth Dragon(2) ..... Senior Vice President, R & D	2006	166,015	19,358	33,264(8)	83,347(13)	301,984
Clarke Neumann ..... Vice President & General Counsel	2006	227,900	26,493	58,050(9)	799(14)	313,242

(1) Mr. Sharp terminated his employment effective April 17, 2007.

(2) Employment began May 15, 2006.

(3) The amounts in this column reflect the dollar amount recognized for financial reporting purposes for the fiscal year ended December 31, 2006, in accordance with FAS 123(R). The method and assumptions used to calculate the value of the stock option awards are discussed in note 2 to our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2006 filed with the Securities and Exchange Commission on March 30, 2007.

(4) Represents total value of bonus awards, comprising a combination of cash awards and restricted stock grants for each individual, awarded in January 2007 for fiscal year 2006 performance, and as discussed under the Compensation Discussion and Analysis section above.

(5) Dr. Stylli received a $105,000 cash payment and 22,807 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.

(6) Mr. Sharp received a $22,230 cash payment and 3,219 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.

(7) Dr. Cantor received a $44,496 cash payment and 6,444 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.

(8) Dr. Dragon received a $19,958 cash payment and 2,891 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.

(9) Mr. Neumann received a $34,830 cash payment and 5,044 shares of restricted stock having a fair market value of $4.604 per share on the date of grant.

(10) Medical Expense Reimbursement, Life, and Disability Insurance.
(11) Life and Disability Insurance.
(12) Medical Expense Reimbursement, Life, and Disability Insurance.
(13) Relocation Expense Reimbursement and related tax gross-up, and Life and Disability Insurance.
(14) Life and Disability Insurance.

Employment Contracts

We maintain employment contracts with three of our NEOs: Dr. Stylli, Dr. Cantor and Mr. Neumann. The following is a summary of the key terms of those contracts:

Dr. Stylli's Contract

In May 2005, we entered into an employment agreement with Dr. Stylli that provided for the employment of Dr. Stylli on an at-will basis commencing June 6, 2005 at an annual salary of $420,000. Pursuant to his employment agreement, Dr. Stylli is eligible for an annual performance bonus of up to 50% of his annual base salary. Dr. Stylli's employment agreement also provides for the grant of an inducement stock option to purchase 333,333 shares of our common stock at an exercise price of $3.30 per share, the fair market value of our common stock on his start date. These stock options are governed by our 1999 Stock Incentive Plan. The agreement also provided for a contingent stock option award. This stock option award to purchase an aggregate of 759,891 shares of our common stock was granted upon the closing of our private placement of common stock in June 2006 at an exercise price equal to the fair market value of our common stock on the closing date. These stock options are governed by our 2006 Equity Incentive Plan. Both stock option awards have a 10-year term, with the shares subject to each grant vesting in 48 equal monthly installments so long as Dr. Stylli continues to be our employee. Pursuant to his agreement, Dr. Stylli is eligible to participate in our employee benefits programs.

Dr. Stylli's employment agreement also provides for term life insurance coverage of $1 million and disability insurance providing long-term coverage of $20,000 per month, provided that the additional annual cost for such term life and disability insurance does not exceed $15,000. Dr. Stylli is entitled to certain payments in the event of the termination of his employment with us in connection with a change in control or under other circumstances; these payments are discussed in more detail in the "Post-Employment Payments" section below.

Mr. Neumann's Contract

In July 2004, we entered into an employment agreement with Mr. Neumann on an at-will basis. Mr. Neumann is entitled to certain payments in the event of the termination of his employment with us; these payments are discussed in more detail in the "Post-Employment Payments" section below. To receive these payments, he also agrees to provide consulting services to us, if requested. Mr. Neumann's employment agreement also provides that all of Mr. Neumann's stock options will become fully vested if and upon a majority of the outstanding shares of our common stock or all or substantially all of our assets are acquired by another business or by an individual. He is a participant in the Change in Control Severance Benefit Plan, also discussed in the "Post-Employment Payments" section below.

Dr. Cantor's Contract

Effective September 15, 2005, Dr. Cantor's amended employment agreement provides for employment on an at-will basis. Dr. Cantor is entitled to certain payments in the event of the termination of his employment with us; these payments are discussed in more detail in the "Post-Employment Payments" section below. Dr. Cantor's employment agreement requires that he provide us with consulting services, if we request, during the period that he receives termination payments. Dr. Cantor's agreement also provides that all of Dr. Cantor's stock options will become fully vested if and upon a majority of the outstanding shares of our common stock or all or substantially all of our assets are acquired by another business or by an individual. He is a participant in the Change in Control Severance Benefit Plan, also discussed in the "Post-Employment Payments" section below.

Post-Employment Payments

We currently provide post-employment payments to our NEOs in certain limited circumstances. Post-employment payments to our Chief Executive Officer, Dr. Stylli, are provided entirely through his employment contract. Payments to our Vice President and General Counsel, Mr. Neumann, and our Chief Scientific Officer, Dr. Cantor, are provided through their employment contracts and our Change in Control Severance Benefit Plan (the "Change in Control Plan"). Dr. Dragon, our Senior Vice President of Research and Development, does not have an employment contract and receives post-employment payments only through the Change in Control Plan. Mr. Sharp, our former Principal Financial Officer, did not have an employment contract and was entitled to receive post-employment payments only through the Change in Control Plan.

Post-Employment Payment Discussion

All of the agreements referenced above have the following common elements:

- No payments are made if there is a termination for cause.
- No payments are made as a result of retirement, death or disability.
- The total of any payments that would be subject to the 'golden parachute excise tax' under Internal Revenue Code Section 280G are limited to the amount that would result in no excise tax being imposed (or, if greater, an amount in which the executive receives a net after-tax payment if the excise tax is assessed).

Payments under employment contracts that are not related to a change in control:

Dr. Stylli. If Dr. Stylli's employment is terminated (i) without cause (as defined in his employment agreement) by us at any time or (ii) for good reason (as defined in his employment agreement) by Dr. Stylli, then Dr. Stylli is entitled to (1) base salary continuation for 12 months following the date of termination; (2) payments equal to 50% of his then current bonus eligibility amount, paid in equal monthly installments during the 12-month period he is entitled to base salary continuation; (3) continued health benefits for 12 months following the date of termination or until an earlier date that Dr. Stylli obtains new employment that provides comparable benefits; and (4) accelerated vesting of all stock options and other equity awards issued by us for a period of 12 months following the date of his termination.

Dr. Cantor and Mr. Neumann. Payments are only made in the event of a termination without cause. If Dr. Cantor's or Mr. Neumann's employment is terminated by us without cause (as defined in each of their employment agreements), then Dr. Cantor or Mr. Neumann, as the case may be, is entitled to receive severance benefits from us in the form of continuation of his base salary then in effect in periodic payments, and reimbursement of health insurance premiums for he and his family, to the same extent we provided during his employment by us, for a period commencing on the effective date of his termination and ending on the earlier of his commencement of employment with another employer or six months following the date of his termination. Each of Dr. Cantor and Mr. Neumann will be available to provide consulting services to us during the period he is receiving severance benefits from us.

Payments under employment contracts that are related to a change in control:

Dr. Stylli is not covered under the Change in Control Plan. If Dr. Stylli's employment is terminated without cause by us or for good reason by Dr. Stylli within three months prior to or 12 months following a change in control (as defined in our Change in Control Plan), then Dr. Stylli is entitled to:

- base salary continuation for 18 months from the date of termination; 24 months if the aggregate consideration received by our stockholders and option holders in connection with the change in control is between $100 million and $250 million; and 36 months if the aggregate consideration received by our stockholders and option holders in connection with the change in control is greater than $250 million;

- payments equal to 150% of Dr. Stylli's then current bonus eligibility amount, paid in equal monthly installments during the period during which Dr. Stylli is entitled to base salary continuation; 200% if the aggregate consideration received by our stockholders and option holders in connection with the change in control is between $100 million and $250 million; and 300% if the aggregate consideration received by our stockholders and option holders in connection with the change in control is greater than $250 million;
- continued health benefits for 18 months following the date of termination or until such earlier date that Dr. Stylli obtains new employment that provides comparable benefits; and
- accelerated vesting in full of all stock options and other equity awards issued by us to Dr. Stylli.

Dr. Stylli's employment agreement provides for a potential reduction in the change in control payments to him if the payments are subject to the excise tax imposed on golden parachute payments and the reduction places him in a better after-tax situation than he would be in without the reduction. During the first 12 months of any severance period, Dr. Stylli is required to be available to provide up to ten hours per month of consulting services to us. We believe the sale of common stock in our private placement constituted the initial "change in control" under the terms of Dr. Stylli's employment agreement. As a result, if Dr. Stylli is terminated without cause by us or for good reason by Dr. Stylli within 12 months following the date of completion of our private placement in June 2006, he would be entitled to the benefits outlined above.

Dr. Cantor's and Mr. Neumann's employment agreements provide for full vesting of all outstanding stock options if and upon a majority of the outstanding shares of our common stock or all or substantially all of our assets are acquired by another business or by an individual.

Payments under the Change in Control Plan:

In April 2005, we adopted the Change in Control Plan to provide severance benefits to designated senior level employees. Currently, Dr. Cantor, Dr. Dragon, and Mr. Neumann are designated to receive benefits following termination of employment in connection with the initial "change in control" (as defined in the Change in Control Plan). Mr. Sharp was also entitled to receive benefits under this Plan prior to his departure in April 2007.

The benefits under the Change in Control Plan apply only if the NEO's employment terminates within the specified periods before or after the initial change in control of the Company. There is no provision for benefits under the Change in Control Plan in connection with subsequent transactions that would have otherwise qualified as "changes in control." We believe the sale of common stock in our June 2006 private placement constituted the initial "change in control" under the terms of the Change in Control Plan.

The Change in Control Plan provides that if a designated NEO is terminated for any reason other than for "cause" or resigns for "good reason" (in each case, as defined in the Change in Control Plan) within three months prior to or 12 months following the closing of our private placement in June 2006, the NEO would continue to receive for a specified supplemental period his base salary, pro-rated bonus amount (calculated from the average of the two most recent annual bonuses paid to the NEO), health insurance and other benefits. The NEO also would receive immediate full vesting of all equity awards. These benefits would be in addition to any other severance benefits that the NEO has under an employment agreement with us.

For Dr. Cantor and Mr. Neumann, the continuation of salary payments and other benefits would be for an additional six months following the expiration of severance benefits under their employment agreements; Dr. Cantor's and Mr. Neumann's employment agreements provide initial severance benefits for up to six months.

Dr. Dragon does not have an employment agreement with us and Mr. Sharp did not have an employment agreement with us. The continuation of salary payments and other benefits would be for six months for Dr. Dragon under the Change in Control Plan and would have been for six months for Mr. Sharp prior to his departure in April 2007.

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3595 John Hopkins Court
San Diego, CA 92121-1331
www.sequenom.com

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