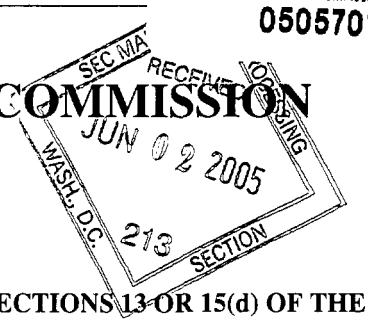
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549



AR/S

~~FORM 10-K/A~~
(Amendment No. 1)

FOR ANNUAL AND TRANSITION REPORTS 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, 2004

OR

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

(NO FEE REQUIRED)

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 of 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: NONE

Securities registered pursuant to Section 12(g) of the Act: Common Stock, $.001 par value

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 an accelerated filer (as defined in Exchange Act Rule 12b-2). 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, 2004 as reported on the Nasdaq National Market, was approximately $56.0 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 April 28, 2005, there were 40,428,276 shares of the Registrant's Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None.

EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A to the Annual Report on Form 10-K of Sequenom, Inc. (the "Company") for the fiscal year ended December 31, 2004 (the "Original Filing"), which was filed with the Securities and Exchange Commission on March 16, 2005, is being filed to amend the Original Filing as follows:

- Item 9A is amended to update Management's Report on Internal Controls Over Financial Reporting to include management's assessment of the effectiveness of the Company's internal control over financial reporting, and
- Item 9A is amended to include the related attestation report of Ernst & Young LLP, the Company's independent registered public accounting firm.

This Amendment No. 1 is filed pursuant to Securities and Exchange Commission Release No. 34-50754 which provides up to 45 additional days beyond the date of the Original Filing for the filing of the above.

As a result of these amendments, the certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed as an exhibit to the Original Filing, has been re-executed and re-filed as of the date of this Form 10-K/A and the Company has filed as Exhibit 23.1 an additional consent of Ernst & Young LLP.

Except for the amendments described above, this Form 10-K/A does not modify or update other disclosures in, or exhibits to, the Original Filing. Except as specifically referenced herein, this Amendment No. 1 does not reflect any event occurring after March 16, 2005, the date of the Original Filing.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer who is also our principal financial officer, we conducted an evaluation of the effectiveness of design and operation of our disclosure controls and procedures as of the end of the fiscal year ended December 31, 2004. Based on this evaluation and due to material weaknesses in internal control over financial reporting described below in "Management's Report on Internal Control over Financial Reporting," our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were not effective to provide reasonable assurance that financial information we are required to disclose in our reports under the Securities Exchange Act of 1934 was recorded, processed, summarized and reported accurately.

Changes in Disclosure Controls and Procedures

We are currently engaged in efforts to improve our disclosure controls and procedures in connection with our actions to improve our internal control over financial reporting in 2005, as discussed below.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining an adequate system of internal control over financial reporting as defined in Rules 13a – 15(f) and 15d – 15(f) under the Securities and Exchange Act of 1934. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are

being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect all misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Further, because of changes in conditions, effectiveness of internal control over financial reporting may vary over time.

A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects the company's ability to initiate, authorize, record, process, or report external financial data reliably in accordance with generally accepted accounting principles such that there is more than a remote likelihood that a misstatement of the company's annual or interim financial statements that is more than inconsequential will not be prevented or detected. An internal control material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected.

We have completed our evaluation and testing of our internal control over financial reporting as required by Section 404 of the Sarbanes-Oxley Act of 2002 and Item 308(a) of Regulation S-K (Internal Control Report). Management assessed the effectiveness of the Company's internal control over financial reporting for the year ended December 31, 2004. In making this assessment, management used the criteria set forth in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on its assessment of internal controls over financial reporting, management has concluded that, as of December 31, 2004, the Company's internal control over financial reporting was not effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. The evaluation was based on the following material weaknesses which were identified:

- *Revenue Recognition.* Some of our MassARRAY system sales are negotiated with unusual terms, such as extended payment terms or equipment and/or software offered at no additional charge. Two sales with such terms were initially recorded as revenue at year end following our internal revenue recognition analyses. After discussions with our independent auditors, an audit adjustment that was material to the financial statements was recorded to defer the revenue at December 31, 2004. As a result, we have concluded that the controls over the recording and analysis of revenue transactions with unusual terms were not effective, and are indicative of a material weakness in revenue accounting controls.
- *Accrued Liabilities and Reserves.* As a result of errors identified in reconciliations and analyses of several accrued liability accounts, we have concluded that controls over our account reconciliation and analyses processes were not effective and are indicative of a material weakness. We over-accrued property taxes and legal and warranty costs, and we under-accrued integration costs related to our acquisition of Gemini Genomics. The effect of these accrual errors required an audit adjustment to accruals that was material to the financial statements.
- *Fixed Assets.* As a result of errors identified in the recording of depreciation and a capital lease, we have concluded that controls over our recording and review of fixed assets are not effective, and are indicative of a material weakness. We incorrectly recorded capital leases as operating leases, resulting in an audit adjustment to fixed assets and depreciation that was material to the financial statements.
- *Financial Statement Close and Reporting.* As a result of errors identified by our independent auditors in the disclosures and amounts in our annual report on Form 10-K subsequent to our financial statement review process but prior to filing of our Form 10-K, we have concluded that controls over our financial statement close and reporting process are not effective, and are indicative of a material weakness.

- *Foreign Subsidiary*: Due to the limited number of employees at the Company's Germany location, there is a lack of segregation of duties and mitigating controls to adequately reduce potential misstatements or ensure appropriate procedures are being followed.

These material weaknesses resulted in adjustments to revenue, accounts payable and accrued liabilities, fixed assets, cash and restricted cash, and amounts in the disclosures to the financial statements. These adjustments were recorded in the 2004 financial statements of Sequenom, Inc. as reported and no previously reported financial statements were restated. These material weaknesses were considered in determining the nature, timing, and extent of audit tests applied in our audit of the 2004 financial statements, and this report does not affect our report dated March 11, 2005 on those financial statements.

In our opinion, management's assessment that Sequenom, Inc. did not maintain effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on the COSO control criteria. Also, in our opinion, because of the effect of the material weaknesses described above on the achievement of the objectives of the control criteria, Sequenom, Inc. has not maintained effective internal control over financial reporting as of December 31, 2004, based on the COSO control criteria.

/s/ Ernst & Young LLP

San Diego, California

April 25, 2005

Item 15. Exhibits and Financial Statements Schedule

(a) Documents filed as part of this report:

(3) The exhibits listed in the Exhibit Index are filed as part of this report.

The following exhibits are filed with this report as indicated below:

Exhibit Number	Description of Document
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
31	Certification of Principal Executive and Financial Officer pursuant to Rule13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act, as amended.

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 29, 2005

SEQUENOM, INC.

By: /s/ STEPHEN ZANIBONI

Stephen Zaniboni
Acting Chief Executive Officer and
Chief Financial Officer

EXHIBIT INDEX

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

AR/S

~~FORM 10-K~~

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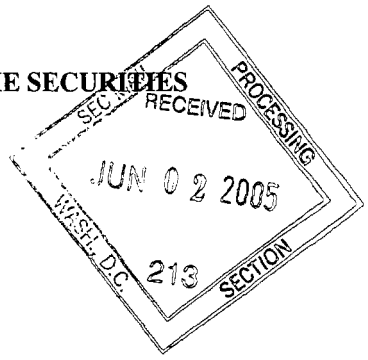

SEQUENOM, INC.
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As of February 28, 2005, there were 40,449,776 shares of the Registrant's Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Items 10, 11, 12, 13 and 14 of Part III incorporate 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 16, 2005.

SEQUENOM, Inc.
FORM 10-K
For the Fiscal Year Ended December 31, 2004
Index

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 of SEQUENOM, Inc. This report also refers 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 the best genetic analysis products that translate genomic science into superior solutions for biomedical research and molecular medicine. 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 may predispose significant portions of the population to major diseases. Based on our discoveries, we have developed gene and diagnostic content for potential partner out-licensing and commercial development opportunities.

We completed numerous scans of the human genome and identified over 60 candidate genes indicating association with the following diseases: breast cancer, lung cancer, prostrate cancer, melanoma, schizophrenia, type II diabetes, obesity, dyslipidemia (HDL-cholesterol), hypertension, osteoarthritis and osteoporosis. In most studies we have further analyzed our initial disease-association findings in additional independent populations followed by appropriate biological confirmation experiments where feasible.

Our goal is to leverage our superior technology to become a significant contributor in the development of molecular medicine, which encompasses applications often referred to as pharmacogenomics, personalized medicine, disease predisposition testing, cancer subtyping, and non-invasive prenatal testing. These fields share the need for analytical applications that define disease on a molecular level and with a high degree of reliability.

We are focusing our efforts on revenue-generating opportunities in the biomedical research market. In particular, we are focusing on molecular diagnostics, including clinical research and diagnostic applications. We are also continuing our efforts to outlicense our disease gene discoveries (potential drug targets, diagnostic and pharmacogenetic markers, signaling pathways and novel biological mechanisms) for potential therapeutic or diagnostic product development by other parties, and we also use our research results to expand the capabilities of our MassARRAY platform.

Genetic analysis is primarily conducted in two biomedical research markets: the academic research market, where we have been and continue to focus, and the clinical analysis market, a newer market for us where we are expanding. The academic research market typically makes initial genetic discoveries. It is a relatively small market and is mainly comprised of government and academic institutions. However, it is often 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 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. This 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 and gene expression analysis in the molecular medicine market. We support epigenetic analysis—the analysis of DNA methylation—and genetic trace analysis applications—the analysis of smallest amounts of genetic material in complex mixtures.

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

As part of our focus on molecular diagnostics, we plan to develop analyte specific reagents (ASRs). ASRs are tests that measure biomarkers, which are intended for use in diagnostic application for identification and quantification of an individual substance in biological specimens. In 2005, SEQUENOM plans to offer ASRs for established genetic tests, such as tests for certain Mendelian disorders.

Novel ASRs might also be developed based on current research conducted using the MassARRAY platform. Leading research scientists are using our MassARRAY system as a basis to develop new applications in the field of applied genetic analysis. Last year, we announced collaborative research agreements with national and international research institutions. These institutions are exploring new areas of genetic testing, with major market potential, including animal testing and genetic trace analysis for prenatal testing, and early cancer detection.

In the area of prenatal diagnostics, in conjunction with the Chinese University of Hong Kong and the renowned genetic researcher, Dr. Dennis Lo, our MassARRAY system is being used to analyze genetic disease in a fetus in a manner that may have the potential to replace current, expensive, technology that has an undesirable risk profile.

MassARRAY product related revenues represented approximately $21.0 million, $28.3 million, and $24.8 million or 94%, 94%, and 80% of our revenues during the years ended December 31, 2004, 2003 and 2002, respectively, while approximately $0.2 million, $1.6 million, and $5.6 million or 1%, 5%, and 18% of our revenues during the years ended December 31, 2004, 2003, and 2002, were derived from genetic validation services. Two of our Asian distributors together represented $4.9 million or 22% of our revenue in the year ended December 31, 2004. Incyte Pharmaceuticals, a research, collaboration and services partner of ours, represented $5.0 million or 16% of our revenues during the year ended December 31, 2002. The Incyte revenues were derived from validation service contracts that have been completed. The service revenue marketplace is competitive and we do not anticipate significant revenue from this area in the future.

We expect revenues from our outlicensing efforts with respect to our disease gene discoveries to be minimal for the foreseeable future. To the extent that revenues are realized, if at all, they may fluctuate significantly as revenues will be based upon out-licensing of gene-related intellectual property, the occurrence of certain milestones, and successful product development and commercialization, 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 diagnostic or other 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 licensees who will need to invest significant dollar amounts in research and development efforts, clinical trials, and obtaining regulatory approvals over several years.

Since our inception, we have incurred significant losses. As of December 31, 2004, we had an accumulated deficit of $416.0 million. We expect to continue to incur losses going forward at least until the end of 2006.

Business

We derive revenue primarily from sales of our MassARRAY hardware, software and consumable products. Our standard MassARRAY system combines four basic components: 1) proprietary analytical reaction technology and sample preparation and dispensing hardware to prepare DNA for analysis, 2) a coated silicon chip known as the SpectroCHIP bioarray, 3) a Matrix-Assisted-Laser-Desorption/Ionization-Time-of-Flight (MALDI-TOF) mass spectrometer, which uses an established analytical method that we have adapted for DNA analysis, and 4) 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 promoting and selling MassARRAY products since 1999.

We have sold over 110 systems worldwide, and MassARRAY technology is accepted as a leading high-performance DNA analysis system. 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 and Turkey.

2004 Highlights:

- *Identified ICAM and NuMA genetic variations that signify a higher risk for breast cancer.* Our discovery of these genetic variations associated with breast cancer may be the most important findings in cancer genetics since the discovery of BRCA1 and BRCA2. In addition we conducted research that identified two additional important gene regions associated with breast cancer, each with comparable potential impact on disease risk. Together these genetic discoveries may have the potential to become a valuable diagnostic panel to determine breast cancer predisposition in the population at large.

- *Formed a joint working group with Siemens Medical Solutions.* We are collaborating with Siemens to explore the requirements for the next generation of molecular diagnostics platforms. Under the terms of the agreement, four MassARRAY Compact Systems will be placed in premier diagnostic and clinical labs in the United States and Europe.

- *Enables breakthrough discoveries.* Our MassARRAY system enabled significant new discoveries in the following fields: diabetes, non-invasive prenatal diagnostic testing, improved cystic fibrosis genetic testing and E.coli mutation detection. Two companies isolated the origin of the first case of bovine spongiform encephalapathy or mad cow disease in North America using MassARRAY technology.

- *Signed strategic collaborations with major clinical research institutions.* The Company signed collaboration agreements with the National Institutes of Health to study diabetes, Chinese University of Hong Kong to develop non-invasive prenatal diagnostic tests, Translational Genomics Institute for

cancer research, USDA-ARS for livestock identity panel development, and the Health Protection Agency in the UK for pathogen analysis.

Products & Applications

In late 2003 we began marketing a benchtop version of our MassARRAY platform known as the MassARRAY Compact system. The MassARRAY Compact system provides comparable data quality to the higher throughput version but is less expensive. The MassARRAY Compact system can analyze up to 3,840 individual samples or 750 pooled samples per day as compared to our standard MassARRAY system which can analyze up to 7,680 individual samples or 1,920 pooled samples per day. Customer demand for the higher throughput standard MassARRAY system has been declining and we expect such demand to continue to decline and to eventually discontinue the higher throughput system. We partially assemble and manufacture some components of the MassARRAY system. However, we depend on a limited number of third-party suppliers to manufacture most of our components. Therefore, due to our limited production capabilities, we may face problems or delays if we need to rapidly increase or modify production.

We have developed a number of applications to accelerate and expand the scope of DNA analysis that address a broad range of customer needs. Our applications include:

- *High-Performance Genotyping.* MassARRAY technology is recognized as a powerful genotyping platform. The power of our MassARRAY technology resides in its ability to rapidly distinguish genetic variations with a high level of precision and sensitivity.
- *Multiplexed Genotyping.* Our Multiplexed Genotyping application enables customers to analyze up to 15 SNPs in an individual reaction, increasing the capacity and throughput of our MassARRAY system while reducing the operating costs.
- *MassARRAY Quantitate Gene Expression (QGE).* MassARRAY QGE uses our Quantitative Gene Analysis software in a proprietary process that enables sensitive, reproducible and accurate measurements of the expression of specific genes. Due to the precise nature of mass spectrometry-based detection and the design of this approach, relative and absolute numbers of target molecules can be determined. MassARRAY QGE supports challenging applications such as allele-specific gene expression profiling.
- *Quantitative Gene Analysis.* Quantitative Gene Analysis relies on the precision of MALDI-TOF mass spectrometry, and is available through a software and bioinformatics package that can be purchased as a product module for the MassARRAY system.
- *Assay Design.* SNP assay design is often a bottleneck in large-scale genotyping projects. An assay is a test that provides analytical information about a reaction of interest, in this case the molecular weight of a SNP. We have developed assay design software that supports the automated design of multiplexed SNP assays without the need for costly and time-consuming optimization or validation.
- *Allele Frequency Analysis.* Allele Frequency Analysis enables customers to determine the frequency of a SNP in a population by quantitatively pooling hundreds of DNA samples into a single assay. This allows our customers to evaluate SNPs within large patient pools before determining whether to include the SNPs in individual genotyping analyses. This throughput advantage over conventional technologies is useful for large, complex genetic studies.
- *Oligonucleotide Quality Control.* Our MassARRAY technology is also used 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.
- *Long-Range Haplotyping.* Our Long-Range Haplotyping application combines MassARRAY technology with a process that enables direct resolution of haplotypes, or groups of SNPs, over large

distances of DNA. Our method has demonstrated a range of up to 24,000 DNA bases, an improvement over existing technologies. We published an article on this method in 2003.

- *Comparative Sequencing.* Comparative Sequencing is an effective method for rapidly comparing a target DNA sequence with a reference DNA sequence to identify differences. This method can be used, for example, to discover the large number of SNPs that are present in the general population for most genes. Comparative Sequencing utilizes our proprietary analytical chemistry and is available through a software and bioinformatics upgrade to the MassARRAY system. Comparative Sequencing has a demonstrated capacity to detect and analyze up to three million bases of DNA sequence per day using a standard MassARRAY system. Targeted SNP Discovery is the first of several potential applications for Comparative Sequencing.
- *Targeted SNP Discovery.* Using the precision, accuracy and resolution of our MassARRAY technology, Targeted SNP Discovery enables customers to detect and locate previously unknown SNPs with what we believe is greater accuracy and speed than competing technologies. Initial studies show rapid discovery of up to 30 percent more SNPs than are available in public databases for even the most extensively researched genes.

Sales and Marketing

SEQUENOM's customers include academic centers, biotechnology companies, and diagnostic and pharmaceutical companies. To maximize market penetration and provide customer support for our customers, we have direct sales and support personnel serving North America, Europe and Asia, in addition to regional distribution partners in other locations. The sales cycles for our products are lengthy. The DNA analysis market is competitive and we may expend significant time and money with no guarantee that we will successfully complete a sale.

Business Strategy

New MassARRAY system applications, such as MassARRAY QGE have expanded the flexibility of our technology, enabling the MassARRAY platform to be applied to most types of DNA analysis. Our MassARRAY Compact system, together with our expanded application base, broadens the potential market for our MassARRAY products to larger segments of the academic research and clinical analysis markets.

In addition, our platform and applications use an open system approach that allows our platform users to customize core applications for their specific needs. We encourage such customer application development in addition to our internal development. With this open approach we are able to publish application notes rapidly to communicate new methods for using the MassARRAY system for each new application without developing new system components. This enables us to get valuable applications to customers more quickly and should facilitate additional application development by MassARRAY system users. As we add new applications we expect to be able to sell systems to a wider potential customer base while increasing consumables usage by our existing customers using these new applications.

High Confidence Candidate Gene Targets

SEQUENOM has identified disease-associated genes that affect the health of significant portions of the population. We identified candidate genes and related targets indicating association with a disease by comparing DNA samples from diseased individuals with DNA samples from healthy individuals. This identification process, which we refer to as a "genome scan," was done using a large number of genetic markers that span the human genome. We then determined statistically significant associations between genetic markers and disease and replicated our findings in independent populations differing in parameters such as race, gender and age. We then validated these associations in multiple human cell types using a set of biological screening technologies. We have completed 12 genome scans, 11 of which are disease specific and one of which is age-based. Though these

scans, we have identified candidate genes indicating association with the following diseases: breast cancer, lung cancer, prostate cancer, melanoma, schizophrenia, type II diabetes (adult-onset diabetes), obesity, dyslipidemia (HDL-cholesterol), hypertension, osteoarthritis and osteoporosis. From our genome scans, we have selected over 60 candidate disease genes for further development through potential out-licensing arrangements.

Assays by SEQUENOM

Our collection of SNP assays contains more than 400,000 validated SNP assays extracted from a database of millions of designed SNP assays. Our 28,000 marker set is a carefully selected and highly polymorphic extraction of markers with a bias towards genes and gene-rich regions of the human genome. We also have 50,000 and 100,000 marker sets for denser coverage of the genome. We have large collections of DNA from diseased and control individuals. This is the raw material that we use with our SNP markers to scan for genes that may cause diseases. Our DNA bank contains approximately 40,000 DNA samples representing more than 15 disease areas with up to 1,500 physiological and biological data points per sample.

Collaboration Agreements

Siemens Medical Solutions. In October 2004, we announced the formation of a joint working group with Siemens Medical Solutions of Siemens AG (NYSE: SI), a leading provider of medical systems and healthcare IT solutions, to explore the requirements for next generation molecular diagnostics platforms. As part of the study, Siemens will purchase four MassARRAY Compact systems from us. The systems will be installed in premier diagnostics and clinical labs in Europe and North America. We and Siemens Medical Solutions will work in concert with the participating reference laboratories to execute a comprehensive functional requirement analysis.

Procter & Gamble Pharmaceuticals. In December 2003, we licensed exclusive rights to our proprietary osteoporosis candidate genes to Procter & Gamble Pharmaceuticals to conduct validation studies on these candidate genes using biological and animal models. The agreement requires us and P&G Pharmaceuticals to cooperate in research involving our osteoporosis candidate genes. Each party is responsible for its own research related costs and expenses. Work under this agreement continues.

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 designed to facilitate our research and development and commercialization of current and future products. Our patent portfolio includes 72 issued patents and more than 70 pending patent applications in the United States in addition to foreign patent rights and pending applications in major industrial nations.

The majority of our issued United States patents pertaining to DNA 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 DNA analysis by mass spectrometry methods, including genotyping and allele frequency analysis 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 success depends to a significant degree upon our ability to continue to develop proprietary products and technologies and to identify and validate useful genetic markers and to thoroughly understand their associations with disease. These genetic markers may play a crucial role in the diagnosis and treatment of disease. We intend

to continue to file patent applications as we develop new products and methods for DNA analysis, and as we develop diagnostic and molecular medicine related technology and products. We also intend to seek to in-license patent rights when appropriate. 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 and molecular biology 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 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. 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 against the licensors of technology licensed to 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 DNA analysis systems and various companies discovering and validating genes associated with specific diseases as well as developing and commercializing products, services, and intellectual property related to these discoveries.

In the DNA analysis marketplace, our MassARRAY system competes with alternative technology platforms that differ in sample amplification, analysis process, sample separation or method of DNA detection. 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: Affymetrix, Inc., Amersham Pharmacia Biotech, Applied Biosystems Group, Beckman Coulter, Inc., Illumina, Inc., Nanogen, Inc., Third Wave Technologies, Inc. and others.

The number of simultaneous reactions MassARRAY technology performs is much smaller than some of our competitors, resulting in slightly higher costs per reaction for some large-scale experiments. While our technology allows researchers to perform high throughput scans at these higher costs per reaction, we alternatively offer a systematic, step-by-step approach to determine specific SNPs from larger groups. This

flexible approach, coupled with MassARRAY's accuracy and rapid analysis, are key competitive strengths of our system.

Several companies also compete with us by utilizing their technologies in the effort to determine the diagnostic or medical utility of SNPs and genes. These companies include Celera Genomics Group, CuraGen Corporation, Human Genome Sciences, Inc., deCODE Genetics Inc., Incyte Genomics Inc., Myriad Genetics Inc., Perlegen Sciences and others. Technologies predominantly used by our competitors include gene sequencing, gene sequence variation detection, gene expression analysis, linkage analysis, gene mapping, gene knockout techniques, homology searches, and others.

Research and Development

We believe that substantial investment in research and development is essential to establishing a long-term competitive position as a provider of genetic analysis tools and diagnostic content. Our research and development expenses for the years ended December 31, 2004, 2003, and 2002, were $18.6 million, $23.3 million, and $30.7 million, respectively.

During 2004 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 efforts are primarily focused on expanding the applications for our MassARRAY technology, developing new technologies, and development for diagnostic applications.

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 and pharmaceutical products that may be developed by us or our corporate partners, collaborators or licensees. Diagnostic or therapeutic products developed by us or our collaborators will require regulatory approval by governmental agencies prior to commercialization. Products that we develop in the molecular medicine or 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 (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 pharmaceutical 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 and pharmaceutical 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, 2005, we employed 148 persons, of whom 36 hold PhD or MD degrees and 23 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, 2005 are as follows:

Name	Age	Position
Executive Officers and Directors		
Stephen L. Zaniboni	47	Acting Chief Executive Officer and Chief Financial Officer
Charles R. Cantor, PhD	62	Chief Scientific Officer and Director
Andreas Braun, MD, PhD	48	Chief Medical Officer
Michael Terry	50	Executive Vice President of Sales and Marketing

Stephen L. Zaniboni. Mr. Zaniboni was appointed acting Chief Executive Officer in February 2005. Mr. Zaniboni joined us as our Chief Financial Officer in April 1997. From 1994 until joining us, Mr. Zaniboni served as Vice President, Finance for Aspect Medical Systems, Inc. Prior to joining Aspect, Mr. Zaniboni was Corporate Controller for Behring Diagnostics from 1988 to 1994. Before joining Behring, he held various financial management positions at Boston Scientific Corp. Mr. Zaniboni began his career with Arthur Andersen & Co. He earned his MBA from Boston College, and he is a Certified Public Accountant.

Charles R. Cantor, PhD. Dr. Cantor joined us as Chief Scientific Officer and Chairman of the Scientific Advisory Board in 1998. In May 2000, Dr. Cantor was appointed to our board of directors. From 1992 until joining the Company, Dr. Cantor served as the chair of and as a professor in the department of biomedical engineering and 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 is a consultant to more than 16 biotech firms, has published more than 350 peer-reviewed articles, and co-authored a three-volume textbook on Biophysical Chemistry. He published the first textbook on genomics entitled, *Genomics: The Science and Technology of the Human Genome Project.* Dr. Cantor earned his Ph.D. from the University of California, Berkeley.

Andreas Braun, MD, PhD. Dr. Braun joined us in 1995 and was promoted from Vice President, Genomics to Chief Medical Officer in September 1999. From 1992 until joining us, Dr. Braun served as Deputy Head of the Clinical Laboratory at the Childrens Hospital, University of Munich. His research work in functional pharmacogenomics targeting the human bradykinin receptor was recognized in 1996 with the Garbor Szasz Award, which was granted by the German Society of Clinical Chemistry. Dr. Braun has published more than 60 peer-reviewed scientific publications. Dr. Braun earned doctorate degrees in biology and medical science from the University of Munich.

Michael Terry. Mr. Terry joined us in April 2003. Before joining the company, Mr. Terry was Executive Vice President of European Operations at Lumenis. From 1997 to 2001, he worked at General Electric's Marquette Medical Systems division, where he held key positions in sales management, business unit management and commercial operations. Prior to that, he held senior sales leadership positions at Aspect Medical Systems, Inc. and Del Mar Medical Systems. Mr. Terry is certified in GE's Six Sigma quality methodology for business process reengineering. He earned a degree in Economics and Business from the University of Wisconsin—Madison.

Risks and Uncertainties Related to Our Business

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

We have a limited operating history.

We are a relatively new company and, for the most part, our technologies, particularly our internally discovered disease gene discoveries are at an early stage of discovery and development. We have experienced limited success in partnering with collaborators to further research, develop, and commercialize our disease gene. We may not be successful in researching, developing, or commercializing these targets under our present collaborations and we may not be successful in entering into any new collaborations involving our disease gene discoveries. We also have a limited history of product sales and we continue to commercialize new products and create new applications for our products. 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 and therapeutic 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, 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, 2004, our accumulated deficit was approximately $416.0 million. These losses have resulted principally from expenses incurred in research and development, from selling, general and administrative expenses associated with our operations 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, and general and administrative expenses as well as expenses associated with consolidating and completing the integration of any business or technology that we may acquire in the future. Our general and administrative expenses are likely to increase as we seek to comply with evolving standards for corporate governance and public disclosure. 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 success in selling, and changes in the demand for, our products and services including our benchtop version, MassARRAY Compact;
- our success in promoting applications, such as gene expression analysis, for use with our products;
- 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 transition our business from internal drug discovery to a focus on diagnostic, clinical research, molecular medicine, and agricultural applications;
- our ability to develop new applications and products, such as analyte specific reagents ("ASRs"), the success of such applications and products;
- the potential need to acquire licenses to new technology 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;
- our ability to promote, and license or sell, candidate disease gene markers that may lead to future therapeutic or 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;
- our ability to clinically validate any potential diagnostic related products and obtain regulatory approval of any potential products; and
- expenses related to, and the results of, any litigation or other proceedings relating to intellectual property rights, employee ownership rights in or entitlements to royalties from employee inventions, or other types of obligations or rights.

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. In recent quarters, our sales mix has been comprised of a greater proportion of higher-margin consumable sales. Our revenues and operating results are also difficult to predict because they depend upon, for example as is the case with our collaboration with Procter & Gamble Pharmaceuticals, the completion of milestones and the duration of and progress made under collaborative research and commercialization programs with partners. 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 way that 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.

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

Based on our current plans, we believe our cash, cash equivalents and short-term investments will be sufficient to fund our operating expenses, debt obligations and capital requirements through 2006. However, 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 outlicensing or selling our disease gene discoveries, and 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;
- the extent to which we enter into, maintain, and derive revenues from licensing agreements, 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 extent to which parties may seek to re-use our consumable chips;
- the level of our legal expenses including those expenses associated with litigation and with intellectual property protection;
- the level of our audit and Sarbanes Oxley 404 compliance expenses and expenses associated with compliance with other corporate governance and regulatory developments or initiatives;
- regulatory changes, competition, and technological developments in our markets.

When we require additional funds, general market conditions or the then-current 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. If additional funds are required and we are unable to obtain them 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 stockholders will be diluted.

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

The continued decline in the demand for MassARRAY systems and consumables, continues to 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. The sales cycles of our new MassARRAY Gene Expression application and MassARRAY Compact system are longer than planned and are consistent with the sales cycles for our other products. Also, over the past year, 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 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.

Our revenues are subject to the risks faced by pharmaceutical, diagnostic, and biotechnology 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 pharmaceutical and biotechnology companies, laboratories, 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;
- pricing pressures and reimbursement policies;
- market-driven pressures on companies to consolidate and reduce costs; and
- other factors affecting research and development spending.

None of these factors are within our control. We have announced that we plan to broaden the markets to which we sell our products and applications and to continue to develop new applications and products for use in new markets. We may target customers in clinical research and clinical marker validation, the emerging field of molecular medicine, diagnostic service laboratories and animal testing and food safety labs. 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. We have a relatively small sales force compared to our competitors. We may need to expand our sales organization in order to increase our sales. Revenues from MassARRAY consumables totaled approximately $16.1 million or 53% of our total revenues in the year ended December 31, 2003 and approximately $13.2 million or 59% of our total revenues for the year ended December 31, 2004. Factors which may limit the use of our consumable chips and other consumables include:

- the extent of our customers' level of utilization of their MassARRAY systems;
- the extent to which customers re-use our consumable chips;
- failure to sell additional MassARRAY systems;
- the training of customer personnel; and
- the acceptance of our technology by our customers.

If our customers are unable to adequately prepare samples for our MassARRAY system, the overall market demand for our products would 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 and for licensing our SNP and gene target discoveries are lengthy, and we may expend substantial funds and management effort with no assurance of successfully selling our products or services or licensing our SNP and gene target discoveries.

The sales cycles for our MassARRAY system products are typically lengthy, and for our Gene Expression application and MassARRAY Compact system, the sales cycles have been longer than originally planned. It now appears that the sales cycles for the Gene Expression application and MassARRAY Compact system are similar to that of our other products, rather than being shorter, and that the lower price point for the MassARRAY Compact system has not resulted in a shorter sales cycle as we had originally expected. The sales cycle for licensing our SNP and gene target discoveries is also typically lengthy. Our sales efforts and our licensing efforts require the effective demonstration of the benefits, value, and differentiation and validation of our products, services, and discoveries, to, and significant training of, multiple personnel and departments within a potential customer. 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 or license our discoveries. 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 may require significant enhancements in our core technology. 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, do not achieve a significant level of market acceptance, our business, financial condition and results of operations could be seriously harmed. We may fail to sustain the market acceptance of our products that have been already established, such as our MassARRAY systems, or of new products and applications. Sustaining or 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. Our customers require that we comply with current good manufacturing practices that we may not be able to meet. We may not be able to maintain acceptable quality standards as we continue or ramp up production. 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. supplies our nanodispensers (also known as pintools), and Majer Precision Engineering, Inc. supplies the pins for the pintools. Amersham Biosciences Corp. is the sole supplier of an enzyme called Thermosequenase. Our consumable chips are supplied by Samsung Electronics Co., Ltd. and also by Process Specialties, Inc. Other than our agreement with Bruker Daltonics, Inc. which expires in 2006, we do not have long-term agreements with these vendors. We have experienced quality problems with and delays in receiving wafers used to produce our consumable 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 may not derive any revenues from our gene discovery programs.

Our gene target discoveries are very early stage discoveries and we may not be able to license them and even if we do license them, they may not result in revenues for us and may not result in marketable products. Our technologies and approach to gene discovery may not enable any licensee to successfully identify the specific genes that cause or predispose individuals to the complex diseases that were the targets of our efforts. The diseases we targeted are generally believed to be caused by a number of genetic and environmental factors. It may not be possible to address such diseases through gene-based therapeutic or diagnostic products. Even if specific genes are identified, our discoveries may not lead to the development of commercial products, or otherwise generate revenue.

We and our licensees and collaborators may not be successful in developing or commercializing therapeutic, diagnostic or other products using our products, services or discoveries.

Development of therapeutic or diagnostic products by our licensees and development of diagnostic or other products by us 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 therapeutic or diagnostic products or we or a collaborator discover 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 therapeutic, diagnostic or other product which we or our licensing or collaborative partners develop.

The Food and Drug Administration, or FDA, must approve any drug product before it can be marketed in the United States. A drug product must also be approved by regulatory agencies of foreign governments before the product can be sold outside the United States. Before a new drug application can be filed with the FDA, the potential product must undergo preclinical testing and clinical trials. In addition, products that we or our collaborators develop in the molecular medicine, 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. In addition, commercialization of any therapeutic, 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 and therapeutic 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 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 drugs and 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 these drugs and 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 that our business strategy requires and such relationships may lead to disputes over technology rights.

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. 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. 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 drug or 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 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 will increase. Conflicts with our collaborators or licensees, or other factors may lead to disputes over technology rights 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.

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 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. If we are unable to obtain rights to those products, 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 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, Samsung Electronics supplies our pintools, Majer Precision Engineering supplies the pins for the pintools, and Samsung Electronics and Process Specialties both supply our consumable chips. 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. Other than our agreement with Bruker Daltonics which expires in 2006, we do not have long-term agreements with these vendors that provide for a continued supply of these components for fixed terms that extend beyond one year. With respect to our agreements with suppliers, our agreements with Samsung have indefinite duration but may be terminated without cause by either party at any time, provided the terminating party has provided the other party 12 months advance written notice, and our agreement with Bruker Daltonics may not be terminated without cause by either party prior to its expiration in 2006. Changes to or termination of our agreements with these parties could result in the loss of access to these aspects of our technology 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 (such as 12 months advance notice of termination under our agreements with Samsung Electronics), 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 or otherwise provide us with adequate protection.

If we breach covenants in our equipment lease or other credit facilities or are otherwise in default under these credit facilities, our lenders may accelerate the maturity dates of our outstanding indebtedness or take other actions under these facilities which would have a material adverse effect on our financial condition and operations.

We had an aggregate of $8.3 million of outstanding indebtedness under our equipment lease and other credit facilities as of December 31, 2004. These credit facilities include positive and restrictive covenants such as requirements that we maintain certain levels of unrestricted cash and net tangible asset balances. During the year ended December 31, 2004, we were in breach of one of the covenants of one of our equipment loans. As a result of this breach, we were required to provide the lender with a letter of credit covering $0.9 million. We are currently not in breach of our loan covenants. If we breach certain covenants in our equipment lease or other credit facilities or are otherwise in default under these credit facilities, our lenders may accelerate the maturity dates of our outstanding indebtedness, impose restrictions on our cash balances or take other actions under these facilities which would have a material adverse effect on our financial condition and operations.

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 goodwill or other intangible assets;
- combining the operations and personnel of acquired businesses with our own, which would be difficult and costly; 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 therapeutic, 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, 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 over 110 MassARRAY systems worldwide to pharmaceutical companies, academic research centers and government laboratories. Some of our customers use our DNA analysis products 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 disease applications, our customers' target diseases 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 or our collaborators' ability to successfully commercialize therapeutic or 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 and to protect our trade secrets. Our patent applications may not result in the issue of patents in the United States or other countries. Our patents may not afford meaningful protection for our technology and products. Others may challenge our patents, and as a result, our patents could be narrowed or invalidated or become unenforceable. Competitors may develop products similar to ours that do not conflict with our patents. Others may develop products for use with the MassARRAY system in violation of our patents, or by operating around our patents or license agreements, which could reduce sales of our consumables. 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. In addition, in August 2004, we were named as a defendant in a complaint filed by a former employee, who asserts a claim for ownership and patent rights for all inventions claimed in patents to which he contributed while employed in Germany. These patents are asserted to include coverage for key elements of our MassARRAY technology, among other patents. A description of this lawsuit and the claims asserted by the plaintiff are included in Item 3 of this report. We deny all material allegations and intend to defend the action vigorously. 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, 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 Charles R. Cantor, PhD, our Chief Scientific Officer and a director, or Andreas Braun, MD, PhD, our Chief Medical Officer, or Stephen Zaniboni, our acting Chief Executive Officer and Chief Financial Officer, or other members of our management team, we may not be able to find suitable replacements and our business may be harmed as a result. In February of 2005, our former President and Chief Executive Officer resigned from his positions with us and our Board of Directors announced that it intends to search for a permanent replacement. We may be unable to attract and retain a suitable replacement. In the interim, our acting Chief Executive Officer may face challenges in serving as both the principal executive officer of the Company as well as the principal financial officer, particularly in light of the demands placed on management to meet Sarbanes Oxley 404 compliance deadlines and attend to other operational and strategic matters with these additional responsibilities. We have employment agreements with each of our officers. However, 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, it could affect our ability to pursue business opportunities, expand our business, and sell our products and applications in new markets.

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 $15.7 million or 52% and $11.7 million or 52% of our sales were made outside of the United States in the years ended December 31, 2003 and 2004, respectively. A successful international effort will require us to develop relationships with international customers and collaborators. 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. International operations 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. 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;
- changes in securities analysts' earnings projections or securities analysts' recommendations;
- general market conditions out of our control.

The stock market in general, and the Nasdaq National 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 and pharmaceutical 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 or 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.

Our Stock May Be Delisted From The Nasdaq National Market

The NASDAQ National Market imposes, among other requirements, listing maintenance standards as well as minimum bid and public float requirements. In recent months our common stock has traded below $1.00 per share and, the closing bid price of our common stock has often been below $1.00 per share. If the closing bid

price of our common stock falls below $1.00 per share for 30 consecutive trading days, Nasdaq automatically sends a non-compliance informing us of the details of non-compliance. Once the warning letter is received, we have 180 days to return to compliance, or we may request listing on the NASDAQ Small Cap Market. We may then be granted an additional 180 days to return to compliance. If we do not return to compliance after the second 180 day period, NASDAQ will issue a letter informing us that NASDAQ will delist our common stock from the NASDAQ Market. We can then request a hearing with NASDAQ to discuss the issue. If our stock were delisted, the ability of our stockholders to sell their common stock would be negatively affected.

Our management believes that certain weaknesses in our system of internal controls constitute material weaknesses and expects to conclude that our internal controls over financial reporting were not effective as of December 31, 2004. Our management has concluded that our disclosure controls and procedures were not effective as of December 31, 2004. We may also be unable to complete our assessment of the effectiveness of our internal controls over financial reporting required by Section 404 of the Sarbanes-Oxley Act of 2002 or our independent auditors may be unable to provide us with the attestation of the adequacy of our internal controls over financial reporting in a timely and satisfactory manner. As a result of the ineffectiveness of our disclosure controls and procedures as of December 31, 2004 and the material weaknesses in our internal controls, investor confidence and our stock price may be adversely affected.

Section 404 of the Sarbanes-Oxley Act of 2002, or SOX, requires that we establish and maintain an adequate internal control structure and procedures for financial reporting and assess on an on-going basis the design and operating effectiveness of our internal control structure and procedures for financial reporting. We were unable to complete our assessment of the effectiveness of our internal controls over financial reporting in order to publish our annual report on internal control over financial reporting by the time we were required to file this Annual Report. Our auditors have not completed their evaluation of our assessment and the testing of the design and operating effectiveness of our internal controls over financial reporting. Because this has been the first year of the new Section 404 requirements, it has been difficult for us and our auditors to predict how long it will take to complete the assessment of the effectiveness of our internal controls over financial reporting, including the final evaluation of the significance of control deficiencies. Although we expect to complete this evaluation for the year ended December 31, 2004 and publish our internal control report by April 30, 2005 as permitted by the Commission's exemptive order described in its release no. 34-50754, there is no guarantee that we will meet this deadline.

As a result of the testing that has been completed to date, we have identified a number of deficiencies in our internal controls over financial reporting that we have reported to our Audit Committee as constituting material weaknesses. In addition, we have concluded that our disclosure controls and procedures were not effective as of December 31, 2004 to provide reasonable assurance that information we are required to disclose in our reports under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported accurately. As a result we will be unable to conclude in our internal control report that our internal control over financial reporting was effective as of December 31, 2004, and our independent auditors will issue an adverse opinion on the effectiveness of our internal control over financial reporting. The material weaknesses that have been identified to date relate to the internal controls regarding recording and analysis of revenue transactions with unusual terms, accrued liability account reconciliation and analyses processes, and recording and review over fixed assets. A more complete description of these deficiencies is included in Item 9A of this Annual Report. Because our internal control evaluation has not been completed, our final conclusions and findings as published in our internal control report may differ from these preliminary findings and potentially could include additional material weaknesses. We cannot assure you that additional material weaknesses or significant deficiencies in our internal controls will not be discovered in the future.

Although we believe we are on schedule to meet the extended deadline there remain risks of unexpected delays and obstacles to completing our assessment and the auditor's attestation of our internal control over financial reporting prior to April 30, 2005, as well as a lack of certainty with respect to the final results of the assessment and testing process. If we do not satisfactorily or timely complete the assessment or testing process,

possible consequences could include sanction or investigation by regulatory authorities such as the Securities and Exchange Commission or The Nasdaq National Market, incomplete or late filing of our Annual Report on Form 10-K, civil or criminal liability, and a decline in investor confidence and our stock price. Our business and our ability to obtain additional financing on favorable terms could also be materially and adversely affected.

Although we continue to document and evaluate our internal controls over financial reporting and seek to remediate matters as necessary or appropriate, we cannot be assured that we will successfully correct any such material weaknesses in our internal controls over financial reporting and disclosure controls and procedures. Any failure to remediate the material weaknesses reported by our independent auditors or to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results, cause us to fail to meet our reporting obligations or result in material misstatements in our financial statements.

We are incurring and will continue to incur, substantial additional expense and diversion of management's time as a result of performing the internal control systems evaluation, testing and remediation required in order to comply with the requirements of Section 404 of SOX. These expenses may have an adverse impact on our operating results.

We have adopted anti-takeover provisions that may limit the ability of another party to acquire us and may prevent or frustrate any stockholder's attempt to change the direction or management of us and that could cause our stock price to decline.

Various provisions of our certificate of incorporation and bylaws and Delaware law may discourage or prevent a third party from acquiring us, even if doing so would benefit our stockholders. In addition, these provisions may prevent or frustrate any stockholder attempt to change our direction or management. These provisions provide for, among other things, a classified board of directors, by which approximately one third of the directors are elected each year, advance notice requirements for proposals that can be acted upon at stockholder meetings and limitations on who may call stockholder meetings. In October 2001, we adopted a stockholder rights plan. Pursuant to our stockholders rights plan, each share of our outstanding common stock has an associated preferred share purchase right. The rights will not trade separately from our common stock until, and are exercisable only upon, the acquisition or potential acquisition by a person or group of or the tender offer for 15% or more of our common stock. In October 2004, we entered into an agreement with Siemens AG whereby we agreed to provide Siemens with written notice of written offers from a third party involving the sale of, transfer of, or license to, all or substantial parts of our assets or the acquisition of the majority of our shares, and agreed to consider any written bid for the same or substantially the same assets or shares submitted by Siemens for a 30 business day period following such notification. As a result of these provisions, we could delay, deter or prevent a takeover attempt or third party acquisition that our stockholders consider to be in their best interests, including a takeover attempt that results in the payment of a premium for our common stock. Our board of directors, without further approval of the stockholders, is authorized to issue "blank check" preferred stock and to fix the dividend rights and terms, conversion rights, voting rights, redemption rights and terms, liquidation preferences and any other rights, preferences, privileges and restrictions applicable to this preferred stock. The issuance of preferred stock could adversely affect the voting power of the holders of our common stock, making it more difficult for a third party to gain control of us, discouraging premium bids for our common stock or otherwise adversely affecting the market price of our common stock.

Changes in stock option accounting treatment will adversely affect our results of operations.

Changes in stock option accounting treatment commencing July 1, 2005 will require us to account for employee stock options as compensation expense in our financial statements. In December 2004, the Financial Accounting Standard Board, or FASB, issued a new statement, which requires all share-based payments to employees, including grants of employee stock options and restricted stock awards, to be recognized as expense in the financial statements based on their fair values. The new rules would be would be effective for us beginning July 1, 2005. We are currently evaluating option and restricted stock valuation methodologies and assumptions

permitted by the FASB for purposes of implementing the change in accounting treatment. This change will materially and adversely affect our reported results of operations and our timing to achieve profitability. For an illustration of the effect of such a change in our recent results of operations, see Note 1 of the Notes to our consolidated financial statements included elsewhere in this report.

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 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 and in Newton, Massachusetts. Collectively, we lease approximately 121,000 square feet under leases that expire from June 2005 to December 2015, each of which contains laboratory, office, manufacturing, or storage facilities. The locations are:

San Diego, California
Newton, Massachusetts
Hamburg, Germany
Cambridge, England
Queensland, Australia

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, Massachusetts 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 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 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. On February 15, 2005, the 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 addition, the settlement is still subject to statutory notice requirements as well as final judicial approval. Management does not anticipate that the ultimate outcome of this event will have a material adverse impact on our financial position.

In August 2004, we were named as a defendant in a complaint filed by a former employee, Daniel P. Little ("plaintiff") in the United States District Court for the Southern District of California, Case No. 04 CV 1737 J. In the complaint, the plaintiff alleges that the we have violated plaintiff's rights under a 1957 German law, known as "Law Relating to Inventions Made by Employees", in connection with plaintiff's activities in Germany for Sequenom, GmbH, beginning in or about October 1995. This law provides for compensation to an employee in consideration for rights to employee inventions. Although we have made several royalty payments to plaintiff, plaintiff alleges that the amount of royalty has been in dispute as have been the triggering events. Plaintiff asserts causes of action against us including rescission, breach of contract, quantum meruit, unfair business practices, and fraud. Plaintiff further alleges that Sequenom GmbH failed to follow the mandatory process of the 1957 German law and never provided the necessary written claim of ownership of the inventions made by plaintiff while in Germany. The plaintiff seeks unspecified monetary damages and other relief including ownership and patent rights for all inventions claimed in patents to which he contributed while employed in Germany, including U.S. Patents 6,258,538, 6,569,385, and 6,602,662, which are asserted to include coverage for key elements of our MassARRAY technology, among other patents. In November 2004, the Court dismissed plaintiff's quantum meruit, unfair business practices, and fraud claims. In November 2004, we answered the complaint, denying all material allegations, and we intend to defend the action vigorously. Management does 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 2004.

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 National Market (the "NNM") 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 NNM for the periods indicated.

	High	Low
Year Ended December 31, 2004:		
Fourth Quarter	$1.63	$0.80
Third Quarter	1.36	0.81
Second Quarter	2.94	1.41
First Quarter	4.24	2.87
Year Ended December 31, 2003:		
Fourth Quarter	$3.78	$2.87
Third Quarter	4.00	2.26
Second Quarter	3.00	1.63
First Quarter	2.12	1.56

There were approximately 498 holders of record of our common stock as of February 28, 2005. We have not paid any cash dividends to date and do not anticipate any being paid in the foreseeable future.

Item 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data is derived from our audited 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,				
	2004	2003	2002	2001[1]	2000
	(In thousands, except per share data)				
Consolidated statements of operations data					
Revenues:					
Product	$ 21,026	$ 28,334	$ 24,868	$ 21,524	$ 8,253
Services	199	1,596	5,646	8,942	1,447
Research	1,224	322	371	269	337
Total revenues	22,449	30,252	30,885	30,735	10,037
Costs and expenses:					
Cost of product and service revenue	11,361	17,089	17,474	19,780	6,574
Research and development	18,604	23,254	30,748	29,327	18,433
Selling, general and administrative	23,299	25,296	31,167	24,167	18,492
Restructuring, long-lived asset and goodwill impairment charge	2,207	—	33,126	—	—
In process research and development	—	—	3,668	24,920	—
Integration costs	—	—	3,000	—	—
Amortization of acquired intangibles	3,075	3,434	3,734	935	—
Amortization of deferred stock compensation	52	187	418	939	3,741
Total costs and expenses	58,598	69,260	123,335	100,068	47,240
Loss from operations	(36,149)	(39,008)	(92,450)	(69,333)	(37,203)
Other income (expense):					
Interest income	773	1,631	3,865	6,796	8,925
Interest expense	(434)	(680)	(408)	(343)	(4,683)
Impairment of equity investment	—	—	(1,000)	—	—
Other (expense) income, net	33	139	(63)	248	75
Loss before income taxes and cumulative effect of accounting change	(35,777)	(37,918)	(90,056)	(62,632)	(32,886)
Deferred income tax benefit	1,152	1,237	1,309	—	—
Net loss before cumulative effect of accounting change	(34,625)	(36,681)	(88,747)	(62,632)	(32,886)
Cumulative effect of accounting change	—	—	(116,947)	—	—
Net loss	$(34,625)	$(36,681)	$(205,694)	$ (62,632)	$(32,886)
Net loss per share, basic and diluted:					
Before cumulative effect of accounting change	$ (0.87)	$ (0.93)	$ (2.32)	$ (2.25)	$ (1.46)
Cumulative effect of accounting change	—	—	(3.07)	—	—
Net loss per share, basic and diluted	$ (0.87)	$ (0.93)	$ (5.39)	$ (2.25)	$ (1.46)
Shares used in computing net loss per share, basic and diluted	39,720	39,487	38,150	27,816	22,454

	As of December 31,				
	2004	2003	2002	2001[1]	2000
Consolidated balance sheet data					
Cash, cash equivalents, short-term investments and restricted cash	$37,943	$ 67,454	$102,550	$143,135	$138,424
Working capital	28,479	56,344	85,370	126,648	134,519
Total assets	58,486	104,936	152,608	356,381	166,262
Total long-term obligations	5,700	6,569	9,742	2,842	1,827
Total stockholders' equity	38,072	72,015	108,249	308,602	144,939

(1) 2001 includes the results of operations of Gemini Genomics from September 20, 2001, the date of acquisition, and affects the comparability of the Selected Financial Data.

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

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 as a result of various factors, including, but not limited to, the risk factors discussed in this report under the caption "Risks and Uncertainties Related to Our Business" in Item 1 of this report. Our expectations and the events, conditions, and circumstances on which these future forward-looking statements are based, will likely change.

SEQUENOM®, SpectroCHIP®, and MassARRAY® are registered trademarks of SEQUENOM, Inc.

Overview

We are a genetics company committed to providing the best genetic analysis products that translate genomic science into superior solutions for biomedical research and molecular medicine. 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 may predispose significant portions of the population to major diseases. Based on our discoveries, we have developed gene and diagnostic content for potential partner out-licensing and commercial development opportunities.

We completed numerous scans of the human genome and identified over 60 candidate genes indicating association with the following diseases: breast cancer, lung cancer, prostrate cancer, melanoma, schizophrenia, type II diabetes, obesity, dyslipidemia (HDL-cholesterol), hypertension, osteoarthritis and osteoporosis. In most studies we have further analyzed our initial disease-association findings in additional independent populations followed by appropriate biological confirmation experiments where feasible. Our goal is to leverage our superior technology to become a significant contributor in the development of molecular medicine, which encompasses applications often referred to as pharmacogenomics, personalized medicine, disease predisposition testing, cancer subtyping, and non-invasive prenatal testing. These fields share the need for analytical applications that define disease on a molecular level and with a high degree of reliability.

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 makes initial genetic discoveries. It is a relatively small market and is mainly comprised of academic institutions. 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 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. This 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 and gene expression analysis in the molecular medicine market. We support epigenetic analysis – the analysis of DNA methylation—and genetic trace analysis applications—the analysis of smallest amounts of genetic material in complex mixtures.

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

As part of our focus on molecular diagnostics, we plan to develop analyte specific reagents (ASRs). ASRs are tests that measure biomarkers, which are intended for use in diagnostic application for identification and quantification of an individual substance in biological specimens. In 2005, SEQUENOM plans to offer ASRs for established genetic tests, such as tests for certain Mendelian disorders.

As of December 31, 2004, our product revenues consisted of revenues from the sales of MassARRAY hardware, software, consumables and maintenance agreements. The impact of our MassARRAY Compact system and other new products and product applications on future revenues, margins, expenses, and cash flows remains uncertain and depends on many factors as described in Item 1 of this report under the caption "Risks and Uncertainties Related to Our Business".

We expect revenues from our out-licensing efforts with respect to our disease gene discoveries to be minimal for the foreseeable future. To the extent that revenues are realized, if at all, they may fluctuate significantly as revenues will be based upon out-licensing of gene and target-related intellectual property, the occurrence of certain milestones, and successful product development and commercialization, 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 diagnostic and therapeutic 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 potential licensees who will need to invest significant dollar amounts in research and development efforts, clinical trials, and obtaining regulatory approvals over several years.

Since our inception, we have incurred significant losses. As of December 31, 2004, we had an accumulated deficit of $416.0 million. We expect to continue to incur losses going forward at least until the end of 2006.

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

In accordance with Staff Accounting Bulleting ("SAB") No. 101, "Revenue Recognition in Financial Statements", and the further guidance in 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 determined by vendor specific objective evidence. 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 over the duration of the software license or upon transfer of title to the customer. We recognize revenue allocated to maintenance fees for ongoing customer support over the maintenance period. Revenues from SNP validation 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, 2004 approximately $1.4 million remained accrued. The amount accrued at December 31, 2004 represents all remaining lease payments, net of estimated sublease income of $1.6 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. Assets with a net book value of $5.0 million were reviewed for impairment following the decision to close the internal drug discovery program in July 2004. As a result of this review, an impairment charge of $1.4 million related to intangible assets acquired from Axiom and other tangible assets which were determined to have no alternative future use was recorded. The remaining $3.6 million of assets were determined to not be impaired by this closure. No impairment of long-lived assets was recorded in 2003. A total impairment charge of $8.1 million was recognized during the year ended December 31, 2002. Intangible assets, primarily resulting from the acquisition of Gemini Genomics, totaled $4.7 million, net of accumulated amortization, at December 31, 2004.
- *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 financial statements by having excess inventory on hand. Our future estimates are subjective and could be incorrect. During 2004, slow-moving inventory reserves of $2.7 million were charged to cost of goods sold, and the total reserve was $3.2 million at December 31, 2004.

New Accounting Pronouncements

In November 2004, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 151, "Inventory Costs, an amendment of ARB No. 43, Chapter 4." This statement amends the guidance in ARB No. 43 Chapter 4, "Inventory Pricing," to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). Paragraph 5 of ARB No. 43, Chapter 4, previously stated that "under some circumstances, items such as idle facility expense, excessive spoilage, double freight, and rehandling costs may be so abnormal to require treatment as a current period charges." This statement requires that those items be recognized as current-period charges regardless of whether they meet the criterion of "so abnormal." In addition, this statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. The provisions of this statement will be effective for inventory costs during the fiscal years beginning after June 15, 2005. We do not believe that the adoption of this statement will have a material impact on our financial condition or results of operations.

On December 16, 2004, the FASB issued SFAS No. 123 (revised 2004), "Share-Based Payment", which is a revision of SFAS No. 123, "Accounting for Stock-Based Compensation" (SFAS 123R). SFAS 123R supersedes APB Opinion No. 25, "Accounting for Stock Issued to Employees," and amends SFAS 95, "Statement of Cash Flows." Generally, the approach in SFAS 123R is similar to the approach described in SFAS 123. However, SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative. SFAS 123R must be adopted no later than July 1, 2005. Early adoption will be permitted in periods in which financial statements have not yet been issued. We expect to adopt SFAS 123R on July 1, 2005.

As permitted by SFAS 123, we currently account for share-based payments to employees using Opinion 25's intrinsic value method and, as such, generally recognize no compensation cost for employee stock options. Accordingly, the adoption of SFAS 123R's fair value method will have a significant impact on our result of operations, although it will have no impact on our overall financial position. The impact of adoption of SFAS 123R cannot be predicted at this time because it will depend on levels of share-based payments granted in the

future and the assumptions for the variables which impact the computation. However, had we adopted SFAS 123R in prior periods, the impact of that standard would have approximated the impact of SFAS 123 as described in the disclosure of pro forma net income and earnings per share in Note 2 to our consolidated financial statements included elsewhere in this report.

Results of Operations
Years ended December 31, 2004, 2003 and 2002

Overview

Revenues

Total revenues were $22.4 million, $30.3 million and $30.9 million for the years ended December 31, 2004, 2003, and 2002, respectively. Product revenues are derived from the sale of MassARRAY systems, consumables including our proprietary SpectroCHIP bioarray, sales and licensing of our proprietary software, maintenance contracts, and license fees from end-users. Revenues for the year ended December 31, 2004 decreased by $7.9 million, or 26%, from the year ended December 31, 2003, primarily from a reduction in hardware sales from $8.3 million in 2003 to $4.1 million in 2004, a reduction in sales of consumables from $16.1 million to $13.2 million, a reduction in software revenue of $0.4 million, and a reduction in service revenues from $1.6 million to $0.2 million. These decreases were partially offset by increases of $0.7 million in maintenance income and $0.9 million in research grant income.

Consumable sales increased from $9.3 million in 2002 to $16.1 million in 2003 and declined to $13.2 million in 2004. This reduction in consumables revenue from 2003 to 2004 was a result of a decline in our average selling prices and volumes for our SpectroCHIP bioarray chips and other consumables. Our customers are increasing their multiplex testing levels on their samples, which in turn reduces the number of chips they consume. Competitive pressures have resulted in us lowering our consumables pricing to reduce the overall cost per genotype for our customers. We expect average volumes of consumables per installed system to decline as more lower-throughput Compact systems are placed in use. Consumable sales increased from 2002 to 2003 as the installed base of MassARRAY systems and the average value of consumables used by each system increased.

Hardware sales revenue declined from $12.8 million in 2002 to $8.3 million in 2003 to $4.1 million in 2004. During 2003, the market for our high throughput systems became increasingly saturated. We launched the Compact system in the first quarter of 2004, to address the larger market of customers with lower throughput requirements. The sales cycle for the MassARRAY Compact system continues to be lengthy. The lower price point for the MassARRAY Compact system has not resulted in a shorter sales cycle as we had originally expected, and resulted in lower revenue when compared to a similar number of high throughput systems sold. We continue to develop our market for clinical genetics and molecular medicine where we believe the testing accuracy and broad DNA analytical capabilities of our MassARRAY system are well suited. We expect Compact system sales to increase during 2005.

Research revenue increased to $1.2 million in 2004 compared to $0.3 million in 2003 and $0.4 million in 2002. 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. We expect grant revenue to decline in 2005.

Domestic and non-US revenues were $10.8 million and $11.7 million, respectively, for the year ended December 31 2004 and $14.6 million and $15.7 million, respectively, for the year ended December 31, 2003. Our distribution contract with one Asia-based distributor, representing $2.3 million of revenue in 2004, expired on December 31, 2004, although sales are continuing under the terms of that agreement until a new contract is negotiated. We do not expect the expiry of this agreement to significantly reduce revenue in 2005.

We expect revenue from present and future out-licensing of our disease gene discoveries to be minimal for the foreseeable future. We do not expect service revenue to be significant in the foreseeable future.

We expect that future revenues for our business will be affected by, among other things, MassARRAY hardware and consumable demand, the acceptance by the market of our MassARRAY Compact system, customer budgets, new product and application introductions, competitive conditions and government research funding.

Cost of product and service revenues and gross margins

Cost of product revenues were $11.2 million, $15.8 million and $13.3 million and gross margins were 47%, 44% and 47% for the years ended December 31, 2004, 2003, and 2002, respectively.

During 2004, higher-margin consumables constituted 63% of the mix of products sold, up from 57% in 2003, while lower-margin hardware sales declined to 20% in 2004 from 29% in 2003. This change in product mix resulted in higher overall margins in 2004 as compared to 2003, despite a reduction in margin on hardware sales in 2004 due to competitive price pressure. Gross margin was reduced by 5% in 2004 due to an increase in the obsolescence reserve expense from $2.4 million in 2003 to $2.7 million in 2004.

The decrease in the gross margin percentage for 2003 compared to 2002 resulted from a change in the overall mix of products sold in 2003. The product mix in 2003 included fewer MassARRAY system hardware components but more higher-margin consumable sales, offset by the phase-out of old products as a result of new product offerings resulting in an obsolescence charge of $2.4 million.

We believe that gross margin in future periods will be affected by, among other things, reductions in the selling price for systems and consumables, lower 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 $0.2 million, $1.3 million and $4.2 million, respectively, and gross margins were -3%, 17% and 26%, respectively, for the years ended December 31, 2004, 2003, and 2002. 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 to $18.6 million from $23.3 million and $30.7 million in the years ended December 31, 2004, 2003, and 2002, respectively. 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 2003 to 2004 of $4.7 million resulted from a reduction in operating supplies of $4.0 million following completion of our genetic scans in 2003 and the closure of our disease gene discovery program in July 2004, $2.0 million in depreciation as assets reached the end of their useful life, and $0.8 million in headcount related costs due to headcount reduction. These decreases were offset by a reduction of $2.1 million of absorption into cost of service contracts following the reduction in service contract volume in 2004 from 2003.

The reduction in costs from 2002 to 2003 of $7.4 million resulted from site consolidation following the Gemini Genomics acquisition in the fourth quarter of 2001, lowering expenses by $2.4 million, reduced headcount following cost reductions and the Axiom acquisition in late 2002 lowering salary expenses by $1.2 million, a $1.0 million reduction in depreciation expense due to assets reaching the end of their useful lives, a reduction in laboratory supplies of $0.9 million, lower collaboration and sample collection expenses of $1.7 million following the completion of the majority of our sample collection activity and the reduction in laboratory headcount, reduced absorption of production costs into inventory of $0.8 million as a result of lower service

contract volume, an elimination of bonuses paid to senior management reducing costs by $0.5 million, $0.2 million reduction in travel costs and $0.3 million of other general cost reduction.

We expect expenses in this area to decrease during 2005 as we realize the cost savings from the closure of our disease gene discovery program in July 2004.

Sales and marketing costs

Sales and marketing costs decreased by $0.5 million to $11.2 million in the year ended December 31, 2004 from $11.7 million in the year ended December 31, 2003, and from $13.7 million in the year ended December 31, 2002. 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 $0.5 million from 2003 to 2004 was primarily due to reduction in selling expenses in Germany of $0.4 million following a reduction in headcount in 2003, reduced depreciation of $0.3 million as assets were fully depreciated, reduced travel costs of $0.2 million due to lower headcount, and reduced operating supplies of $0.1 million. These increases were offset by increased U.S. headcount expenses of $0.2 million and promotional expenses of $0.3 million.

The decrease from 2002 to 2003 of $2.0 million related to $1.3 million from overseas headcount and site expenses following the closure of locations and elimination of headcount acquired during the mergers of Axiom and Gemini that were considered to be in excess of our current and future needs, lower promotion and printing expenses of $0.5 million, and reduced U.S. headcount expenses of $0.3 million. These increases were offset by an increase in other general expenses of $0.1 million.

We expect headcount and associated expense to increase during 2005 as we strengthen our sales and field support operations.

General and administrative costs

General and administrative costs decreased by $1.5 million to $12.1 million in the year ended December 31, 2004 from $13.6 million in the year ended December 31, 2003, and from $17.5 million in the year ended December 31, 2002. These expenses consist primarily of salaries and related expenses for legal, finance and human resource personnel, and their related department expenses.

The decrease from 2003 to 2004 of $1.5 million related to cost savings in legal fees of $0.8 million due to reduced patent portfolio expenses, headcount reductions of $0.2 million, a reduction in property and other taxes of $0.4 million, and lower insurance costs due to reduced premiums of $0.6 million. These reductions were offset by an increase in building operating costs of $0.4 million and other expenses of $0.1 million.

The decrease from 2002 to 2003 of $3.9 million related to cost savings in legal expenses of $1.9 million, $0.2 million from site reduction following the closure of locations and elimination of headcount acquired during the mergers that were considered to be in excess of our needs, other headcount reductions of $0.5 million, a reduction in property and other taxes of $0.5 million, lower communication and public relations costs of $0.4 million, and an elimination of performance bonuses paid to senior management reducing costs by $0.7 million. These reductions were offset by an increase in insurance premiums of $0.7 million. The remaining reduction of $0.4 million was a result of general administrative expense control.

Restructuring charges and impairment of long-lived assets and goodwill

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 to seek to capitalize on the value of our disease gene discoveries for potential diagnostic and therapeutic product development and certain other programs are continuing within our ongoing research and development activities. During 2004, we incurred total charges of $2.2 million related to the closure of these activities. We expect to incur no further costs with respect to this closure. Of the $2.2 million charge, $1.4 million relates to non-cash charges from the write-off of $1.1 million on equipment taken out of service and $0.3 million of intangible assets of no value to our ongoing business and $0.8 million relates to employee severance costs and other contractual obligations which have all been paid as of year end.

The impairment of assets and goodwill charge of $33.1 million in the year ended December 31, 2002 consisted of two elements. Following the adoption of SFAS No. 142, "Goodwill and Other Intangible Assets" we performed the annual test for impairment of goodwill at October 1, 2002. As a result of this test, we recognized a non-cash charge of $25.0 million to write off all the remaining goodwill arising from the acquisitions of Gemini Genomics and Axiom Biotechnologies. In accordance with SFAS No. 144, 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. As a result of this examination, we determined that long-lived assets with a carrying amount of $10.8 million were impaired and wrote them down to their estimated fair value of $2.7 million. Fair value was based on discounted expected future cash flows to be generated by these assets. These assets included licensed intellectual property, prepayments, software acquired as part of the Gemini Genomics acquisition, and fixed assets. An impairment charge of $8.1 million was accordingly recorded in the fourth quarter of 2002 for these assets.

In-process research and development

In connection with the acquisition of Axiom Biotechnologies in 2002, we recorded a non-cash in-process research and development charge of $3.7 million. This amount represented the value of the research and development projects acquired from Axiom Biotechnologies that had not reached technological feasibility and did not have alternative future uses as of the date of acquisition.

Integration costs

The $3.0 million integration charge in 2002 related to our decision to close our Uppsala, Sweden facility that we acquired in 2001. The amount consisted primarily of book value of the assets at time of closure. We do not anticipate any additional charges related to the closure of this facility.

Amortization of acquired intangibles

In connection with the acquisition of Gemini Genomics, we acquired approximately $18.7 million of intangible assets, including clinical data collections and patent rights. In connection with the acquisition of Axiom Biotechnologies, we acquired approximately $0.5 million of intangible assets, including patent rights, human cell banks, and assay technology. These intangible assets will be amortized over three to five years. The 2004 amortization charge of $3.1 million represents the amortization of all these assets held throughout the year, and the reduction in expense of $0.3 million from 2003 is due to an impairment of intangible assets of $0.3 million related to the Axiom acquisition following the closure of our gene discovery program and an adjustment to the carrying value of assets related to the Gemini acquisition of $2.6 million. The 2003 amortization of $3.4 million represents the amortization of all these assets held throughout the year. The reduction in the amortization charge of $0.3 million from 2002 to 2003 primarily relates to the loss of access to clinical data collections following the closure of our Uppsala, Sweden facility. The 2002 amortization of $3.7 million represents the amortization of the Gemini Genomics intangible assets throughout the year and the amortization of the Axiom Biotechnologies intangible assets from the date of acquisition.

Interest income

Interest income was $0.8 million in 2004, compared to $1.6 million in 2003, and $3.9 million in 2002. The decrease from 2003 to 2004 and from 2002 to 2003 resulted from lower interest rates and lower average balances of interest-bearing investments.

Interest expense

Interest expense was $0.4 million in 2004, compared to $0.7 million in 2003, and $0.4 million in 2002. The decrease from 2003 to 2004 resulted from our lower level of borrowings in 2004 as we pay off our capital leases. The increase from 2002 to 2003 is from the increase in the amount of debt outstanding during those years. Interest expense in all years resulted primarily from interest payments under our capital lease obligations and long-term debt.

Deferred income tax benefit

The deferred tax benefit of $1.2 million, $1.2 million and $1.3 million in 2004, 2003 and 2002, respectively, is due to the amortization on the intangible assets, including clinical data collections and patent rights, acquired from Gemini Genomics.

Cumulative effect of accounting change

Effective January 1, 2001, we adopted SFAS No. 142, which requires that goodwill and intangible assets deemed to have an indefinite useful life will no longer be amortized but will be reviewed for impairment upon adoption of SFAS No. 142 and annually thereafter. We recognized a non-cash charge of $116.9 million to reduce the carrying value of our goodwill in 2002. The charge is non-operational in nature and is reflected as a cumulative effect of an accounting change in the consolidated statement of operations.

Income taxes

As required by Statement of Financial Accounting Standards No. 109 (SFAS No. 109), "Accounting for Income Taxes", we recognize tax assets on the balance sheet if it is "more likely than not" that they will be realized on future tax returns. At December 31, 2004, we have provided a full valuation allowance against deferred tax assets of $116.5 million, reflecting uncertainties associated with future profitability.

At December 31, 2004, we have federal and state tax net operating loss carryforwards of approximately $212.8 million and $105.4 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 $4.9 million of the state tax loss carryforwards will expire in 2005 and the state tax loss carry-forwards will continue to expire in 2006 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 $11.5 million and $35.6 million, respectively, which may be carried forward indefinitely.

Approximately $32.0 million of the UK 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 UK 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 $0.8 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 $6.9 million and $6.1 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 UK 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.

Liquidity and capital resources

As of December 31, 2004, cash, cash equivalents, short-term investments and restricted cash totaled $37.9 million, compared to $67.5 million at December 31, 2003. Our cash reserves are held in a variety of interest-bearing instruments, including investment-grade corporate bonds, commercial paper and money market accounts.

Short-Term

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 30, 2004 was $23.2 million compared to $29.7 million for 2003. The use of cash was a result of the net loss of $34.6 million for year ended December 31, 2004, adjusted for non-cash depreciation and amortization of $8.8 million, $1.2 million of deferred income tax benefit and reductions in accounts receivable balances of $1.1 million due to lower sales activity and reduced time taken to collect receivables, reductions of $5.7 million in inventory levels from inventory management and valuation reserves, increases in other liabilities of $0.3 million, and reductions in accounts payable and deferred income of $5.8 million. At our current and anticipated level of operating loss, we expect to incur an operating cash outflow on a quarterly basis. We anticipate that this will continue in the future as we continue to invest in new product research and development, regulatory approval, and sales, marketing and support activities. As a result, our cash, cash equivalents and marketable security balances will decline. If the current trend of cash use continues, we will need additional capital to support our activities, as described in our discussion under the heading "Long-Term" below.

Investing activities, other than the changes in our short-term investments and restricted cash, used $2.9 million in cash during 2004 due to leasehold improvements and purchases of additional laboratory equipment.

Net cash used by financing activities was $3.9 million for year ended December 31, 2004 compared to $3.0 million used by financing activities in 2003. Financing activities during 2004 included net payments of $4.1 million for long-term debt and capital leases and the receipt of proceeds from the exercise of stock options and employee stock purchase plan purchases of $0.2 million.

Long Term

When we require additional funds, general market conditions or the then-current 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. If additional funds are required and we are unable to obtain them 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 stockholders will be diluted.

The following table summarized our contractual obligations as of December 31, 2004 ($ in thousands):

Contractual obligations	Total	Less Than 1 Year	1-3 Years	After 3 Years
Open purchase orders	$ 2,680	$ 2,680	—	—
Long-term debt	7,673	3,320	4,353	—
Capital lease obligations	591	397	194	—
Operating leases	50,469	4,606	9,074	36,789
Total contractual obligations	$61,413	$11,003	$13,621	$36,789

Future operating lease commitments for leases have not been reduced by minimum sublease rentals to be received through December 2010 aggregating $1.6 million. Open purchase orders are primarily for inventory items and research and development supplies.

Other commitments and contingencies that may result in contractual obligations to pay are described in Note 7 to our consolidated financial statements included elsewhere in this report.

Based on our current plans, we believe our cash, cash equivalents and short-term investments will be sufficient to fund our operating expenses, debt obligations and capital requirements at least through 2006. However, 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 and therapeutic 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, achieving Good Manufacturing Practice certification, and ASR 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 extent to which parties may seek to re-use our consumable chips;
- 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 have a $6.5 million bank line of credit provided by the Union Bank of California, of which $4.4 million is available for borrowing and expires on March 31, 2005. At September 30, 2004, we were in breach of one of the covenants of this loan requiring us to have in excess of $40 million of unrestricted cash and short-term investments. We remedied the breach by providing the lender with a letter of credit for $0.9 million. At December 31, 2004, we were in compliance with all covenants. The line of credit agreement requires us to comply with various financial and restrictive covenants. Financial covenants include requirements that we

maintain certain levels of unrestricted cash and net tangible asset balances. We have no commitments for any additional financings.

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 the prevailing interest rate later rises, 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 ("GBP") and the Euro ("EUR"). The subsidiaries' accounts are translated from the relevant functional currency to the US 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 US 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.

Functional currency of operations	As of December 31, 2004 Net foreign monetary assets/(liabilities)		
	Euro	US dollars	GBP
		($ in millions)	
Euro	—	$0.5	$0.3

A movement of 10% in the US dollar to GBP exchange rate would create an unrealized gain or loss of approximately $30,000. A movement of 10% in the US dollar to Euro exchange rate would create an unrealized gain or loss of approximately $50,000. 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, 2004. We had no deferred gains or losses during the years ended December 31, 2004, 2003 or 2002.

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

Disclosure Controls. Under the supervision and with the participation of our management, including our acting principal executive officer who is also our principal financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended, as of December 31, 2004. Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were not effective to provide reasonable assurance that information we are required to disclose in our reports under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported accurately.

Internal Control over Financial Reporting. We are in the process of completing our evaluation and testing of our internal control over financial reporting as required by Section 404 of the Sarbanes-Oxley Act of 2002 and Item 308(a) of Regulation S-K. In this Annual Report on Form 10-K, we have not published our annual report on internal control over financial reporting (Internal Control Report) as permitted by the Commission's exemptive order described in its release no. 34-50754. We expect to complete our evaluation for the year ended December 31, 2004, and publish our Internal Control Report, on or before April 30, 2005 as permitted by the exemptive order. Based on the testing completed to date, utilizing criteria established in "Internal Control – Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria), we have identified a number of deficiencies in our internal control over financial reporting. A number of these deficiencies individually or in the aggregate have been reported to the Audit Committee as constituting "material weaknesses," meaning that in those areas our internal controls either individually or in the aggregate are not sufficient to prevent or allow us to detect a material misstatement of our financial statements in every instance. These material weaknesses are described below.

There were no changes to any reported financial results that have been released by us as a result of these identified deficiencies. We are developing a plan to remedy the identified deficiencies and this plan will be discussed in our Internal Control Report. However, we will be unable to conclude in our Internal Control Report that our internal control over financial reporting was effective as of December 31, 2004. As a result, we expect that our independent auditors will issue an adverse opinion on the effectiveness of our internal control over financial reporting, which we intend to file with our Internal Control Report on or before April 30, 2005.

The following summarizes all material weaknesses that we have identified to date and reported to our Audit Committee. Since our internal control evaluation has not been completed, our final conclusions and findings as published in our Internal Control Report may differ from these preliminary findings and potentially could include additional material weaknesses.

- *Revenue Recognition.* Some of our MassARRAY system sales are negotiated with unusual terms, such as extended payment terms or equipment and/or software offered at no additional charge. Two sales with such terms were initially recorded as revenue at year end following our internal revenue recognition analyses. After discussions with our independent auditors, an audit adjustment that was material to the financial statements was recorded. This revenue was deferred at December 31, 2004. As a result, we have concluded that the controls over the recording and analysis of revenue transactions with unusual terms, were not effective, and are indicative of a material weakness in revenue accounting controls.

- *Accrued Liabilities and Reserves.* As a result of errors identified by our independent auditors in reconciliations and analyses of several accrued liability accounts, we have concluded that controls over our account reconciliation and analyses processes were not effective and are indicative of a material weakness. We over-accrued property taxes and legal and warranty costs, and we under-accrued our Gemini integration costs. The estimates for these accruals were based on analyses that did not include current information available to us. The effect of these accrual errors required an audit adjustment to accruals that was material to the financial statements.
- *Fixed Assets.* As a result of errors identified by our independent auditors in the recording of depreciation and a capital lease, we have concluded that controls over our recording and review of fixed assets, are not effective, and are indicative of a material weakness. We incorrectly recorded capital leases as operating leases, resulting in an audit adjustment to fixed assets and depreciation that was material to the financial statements.

Changes in Controls. Based on our findings that our disclosure controls and procedures were not effective and that we had several material weaknesses in internal controls over financial reporting, we have taken steps to strengthen our disclosure controls and procedures and our internal control over financial reporting, accounting functions and revenue recognition as described below. In connection with the testing performed to date, control deficiencies still exist that are indicative of material weaknesses, which indicate that we need to take additional steps to remediate these situations. We expect to address the remaining actions required to remediate our existing weaknesses in our Internal Control Report. As discussed below, we have been and continue to be engaged in efforts to improve our internal controls and procedures and we expect that these efforts in the first half of 2005 will address the deficiencies.

In connection with the company's efforts to comply in 2004 with the requirements of Section 404(a) of the Sarbanes-Oxley Act, a consulting firm was retained to assist with the analysis and testing and to identify areas where internal controls need to be enhanced. In response to their findings, and the preliminary findings of our independent auditors, we are making changes in disclosure controls and procedures and internal controls over financial reporting. These changes include the following:

- We will improve our procedures for verifying and documenting the creditworthiness of prospective customers.
- We are making changes to our financial statement close procedures for estimating, analyzing and documenting account reconciliations.
- We are initiating additional training of our sales organizations regarding revenue recognition rules and improved communication.
- We are formalizing and enhancing our documentation and review of revenue recognition guidelines and processes.
- We are formalizing the documentation of the financial statement close review process.

We are still identifying deficiencies and formulating our plans for remedying our deficiencies, and will report the results of those activities in our Internal Control Report. We plan to take additional steps to strengthen our internal controls, including improved communication, additional training, improved operating controls, augmenting our finance staff, and enhanced reporting processes. We have communicated to the Audit Committee the material weaknesses identified to date in our internal control over financial reporting. Management, with the oversight of the Audit Committee, is committed to effective remediation of known material weakness and significant deficiencies as quickly as possible.

There have been no changes in our internal control over financial reporting during the quarter ended December 31, 2004 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Appearing as exhibits to this report is the certification of our chief executive officer and chief financial officer required in accordance with Section 302 of the Sarbanes-Oxley Act of 2002. The disclosures set forth in this Item 9A contain information concerning the evaluation of our disclosure controls and procedures, and changes in internal control over financial reporting, referred to in the certifications. This Item 9A should be read in conjunction with the certifications for a more complete understanding of the topics presented.

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 Stockholders that we currently expect to be held on June 17, 2004 (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 acting principal executive officer, principal financial officer and principal accounting officer) 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

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 contained in the section entitled "Section 16(a) Beneficial Ownership Reporting Compliance" in the Proxy Statement and is incorporated herein by reference.

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

The information required by this item is incorporated herein by reference from the information in the section entitled "Security Ownership of Certain Beneficial Owners and Management" in the Proxy Statement.

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, 2004.

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	4,529,610	$3.75	3,083,856[1][2]
Equity compensation plans not approved by security holders	[3]		
Total	4,529,610	$3.75	3,083,856

(1) Of the 3,083,856 shares available for issuance, 1,292,981 are reserved for issuance under our 1999 Employee Stock Purchase Plan, or ESPP.

(2) Evergreen provisions:

1999 ESPP Provision

The number of shares of our common stock available for issuance under the Plan shall automatically increase on the first trading day of January each calendar year during the term of the Plan, 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 500,000 shares.

1999 Equity Incentive Plan Provision

The number of shares of our common stock available for issuance under the Plan shall automatically increase on the first trading day of January each calendar year during the term of the Plan, beginning with calendar year 2001, by an amount equal to four percent (4%) 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 2,000,000 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 558,471 options to purchase our common stock remain outstanding at a weighted average price of $17.50. Of these, 3,200 shares are reserved for issuance under the Gemini Genomics Company Share Option Plan-Part A, 14,461 shares are reserved for issuance under the Gemini Genomics Company Share Option Plan-Part B, 14,536 shares are reserved for issuance under the Gemini International Executive Share Option Plan, 526,274 shares are reserved for issuance outside the plan.

In connection with our acquisition of Axiom Biotechnologies, a total of 86,698 options to purchase our common stock remain outstanding at a weighted average price of $4.34, 2,511 shares are reserved for issuance under the Axiom 1997 Plan, 79,583 shares are reserved for issuance outside of the plan, and 4,604 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[1]	Amended and Restated Certificate of Incorporation of the Registrant.
3.2[9]	Bylaws of Registrant, as amended.
3.3[7]	Registrant's Certificate of Designation of Series A Junior Participating Preferred Stock.
4.1[1]	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.
10.1[1]	Form of Warrant Agreement between the Registrant and holders of the Series C Preferred Stock warrants.
10.2[1]	Form of Indemnification Agreement between the Registrant and each of its directors.
10.3[1]	Form of Indemnification Agreement between the Registrant and each of its officers.
10.4[1]#	1994 Stock Plan.
10.5[1]#	1994 Stock Plan Form of Non-Qualified Stock Option Grant.
10.6[1]#	1994 Stock Plan Form of Incentive Stock Option Grant.
10.7[1]#	1994 Stock Plan Form of Stock Restriction Agreement.
10.8[1]#	1998 Stock Option/Stock Issuance Plan.
10.9[1]#	1998 Stock Option/Stock Issuance Plan Form of Notice of Grant of Stock Option.
10.10[1]#	1998 Stock Option/Stock Issuance Plan Form of Stock Option Agreement.
10.11[1]#	1998 Stock Option/Stock Issuance Plan Form of Stock Purchase Agreement.
10.12[1]#	1998 Stock Option/Stock Issuance Plan Form of Stock Issuance Agreement.
10.13[1]#	1999 Stock Incentive Plan.
10.14[1]#	1999 Employee Stock Purchase Plan.
10.15[1]#	1999 Stock Incentive Plan Form of Notice of Grant of Stock Option.
10.16[1]#	1999 Stock Incentive Plan Form of Stock Option Agreement.

Exhibit Number	Description of Document
10.17[2]	Business Loan Agreement, dated March 3, 2000, between the Registrant and Union Bank of California.
10.18[3]	Building Lease Agreement, dated March 29, 2000, between the Registrant and TPSC IV LLC, a Delaware limited liability company.
10.19[4]	Global Master Rental Agreement, dated May 4, 2000, between the Registrant and Comdisco.
10.20[6]#	First Amended and Restated Employment Agreement, dated as of August 1, 2000 between Steve Zaniboni and the Registrant.
10.21[6]#	First Amended and Restated Employment Agreement, dated as of August 1, 2000 between Andi Braun and the Registrant.
10.22[5]#	Form of Employment Agreement between Registrant and Charles Cantor, Ph.D.
10.23[8]*	Collaboration Agreement, dated December 17, 2003, by and between the Registrant and Procter & Gamble Pharmaceuticals, Inc.
10.24[10]#	Form of Exec-U-Care Plan.
10.25[11]*	Diagnostic Platform Benchmarking Study and Evaluation, dated October 25, 2004, by and between the Registrant and Siemens AG
10.26[11]#	Form of Stock Issuance Agreement under 1999 Stock Incentive Plan
10.27[12]#	Separation Agreement, dated February 11, 2005, by and between the Registrant and Antonius Schuh, Ph.D.
21.1	Subsidiaries of Registrant.
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
31.1	Certification of Principal Executive and Financial Officer pursuant to Rule13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act, as amended.
32	Certification of Chief Executive Officer and Chief 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.

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 14, 2005

SEQUENOM, INC.

By: /s/ STEPHEN ZANIBONI

Stephen Zaniboni
Acting Chief Executive Officer and
Chief Financial Officer

POWER OF ATTORNEY

Know all men by these presents, that each person whose signature appears below constitutes and appoints Stephen L. Zaniboni, his attorney-in-fact, 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/ STEVEN L. ZANIBONI **Steven L. Zaniboni**	Acting Chief Executive Officer and Chief Financial Officer (Principal Executive, Financial and Accounting Officer)	March 14, 2005
/s/ CHARLES R. CANTOR, PH. D. **Charles R. Cantor, Ph. D.**	Chief Scientific Officer and Director	March 14, 2005
/s/ HARRY F. HIXSON, JR., PH. D. **Harry F. Hixson, Jr., Ph. D.**	Chairman of the Board of Directors	March 14, 2005
/s/ ERNST-GUNTER AFTING, PH.D., M.D. **Ernst-Gunter Afting, Ph.D., M.D.**	Director	March 14, 2005
/s/ DANIEL L. KISNER, M.D. **Daniel L. Kisner, M.D.**	Director	March 14, 2005
/s/ RONALD M. LINDSAY, PH.D. **Ronald M. Lindsay, Ph.D.**	Director	March 14, 2005
/s/ JOHN E. LUCAS **John E. Lucas**	Director	March 14, 2005

SEQUENOM, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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, 2004 and 2003 and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2004. 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. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of SEQUENOM, Inc. and subsidiaries at December 31, 2004 and 2003 and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2004, in conformity with generally accepted accounting principles in the United States. 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.

/s/ ERNST & YOUNG LLP

San Diego, California
March 11, 2005

SEQUENOM, INC.
CONSOLIDATED BALANCE SHEETS

(Dollars in thousands, except share and per share information)

	December 31, 2004	December 31, 2003
Assets		
Current assets:		
Cash and cash equivalents	$ 3,589	$ 17,940
Short-term investments, available-for-sale	24,426	39,792
Restricted cash and investments	5,028	5,469
Accounts receivable, net	3,095	4,076
Inventories, net	4,889	10,569
Other current assets and prepaid expenses	481	1,142
Total current assets	41,508	78,988
Equipment and leasehold improvements, net	6,722	9,838
Intangible assets	4,743	11,338
Restricted cash and investments	4,900	4,253
Other assets	613	519
Total assets	$ 58,486	$ 104,936
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 3,065	$ 5,256
Accrued expenses	4,575	8,223
Accrued acquisition and integration costs	306	551
Deferred revenue	1,366	2,542
Current portion of long-term bank debt	3,320	5,621
Current portion of capital lease obligations	397	451
Total current liabilities	13,029	22,644
Deferred revenue, less current portion	58	34
Capital lease obligations, less current portion	194	57
Long-term bank debt, less current portion	4,353	5,624
Other long-term liabilities	37	—
Long-term accrued acquisition and integration costs, less current portion	1,116	888
Long-term deferred tax liability	1,627	3,674
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—75,000,000; issued and outstanding shares 40,397,887 and 39,565,342 at December 31, 2004 and 2003, respectively	40	39
Additional paid-in capital	453,899	453,096
Deferred compensation related to stock options	(565)	—
Accumulated other comprehensive income	721	278
Accumulated deficit	(416,023)	(381,398)
Total stockholders' equity	38,072	72,015
Total liabilities and stockholders' equity	$ 58,486	$ 104,936

See accompanying notes.

SEQUENOM, INC.

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

	Years ended December 31,		
	2004	2003	2002
Revenues:			
Consumables	$ 13,162	$ 16,083	$ 9,291
Other product revenue	7,864	12,251	15,577
Services	199	1,596	5,646
Research	1,224	322	371
Total revenues	22,449	30,252	30,885
Costs and expenses:			
Cost of consumable and product revenue	11,157	15,759	13,277
Cost of service revenue	204	1,330	4,197
Research and development	18,604	23,254	30,748
Selling and marketing	11,158	11,692	13,672
General and administrative	12,141	13,604	17,495
Restructuring charges and impairment of long-lived assets and goodwill	2,207	—	33,126
In-process research and development	—	—	3,668
Integration costs	—	—	3,000
Amortization of acquired intangibles	3,075	3,434	3,734
Amortization of deferred stock compensation	52	187	418
Total costs and expenses	58,598	69,260	123,335
Loss from operations	(36,149)	(39,008)	(92,450)
Interest income	773	1,631	3,865
Interest expense	(434)	(680)	(408)
Impairment of equity investment	—	—	(1,000)
Other income (expense)	33	139	(63)
Loss before income tax and cumulative effect of accounting change	(35,777)	(37,918)	(90,056)
Deferred income tax benefit	1,152	1,237	1,309
Loss before cumulative effect of accounting change	(34,625)	(36,681)	(88,747)
Cumulative effect of accounting change	—	—	(116,947)
Net loss	$(34,625)	$(36,681)	$(205,694)
Net loss per share, basic and diluted			
Before cumulative effect of accounting change	$ (0.87)	$ (0.93)	$ (2.32)
Cumulative effect of accounting change	—	—	(3.07)
Net loss per share, basic and diluted	$ (0.87)	$ (0.93)	$ (5.39)
Weighted average shares outstanding, basic and diluted	39,720	39,487	38,150

See accompanying notes.

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock		Additional Paid-In Capital	Deferred Compensation	Unrealized Gain (Loss) on available for sale securities	Translation Adjustment Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount						
				($ in thousands)				
Balance at December 31, 2001	37,367,228	$ 37	$447,756	$(605)	$ (93)	$ 530	$(139,023)	$ 308,602
Net loss	—	—	—	—	—	—	(205,694)	(205,694)
Unrealized loss on available-for-sale securities	—	—	—	—	(19)		—	(19)
Translation adjustment	—	—	—	—	—	(29)	—	(29)
Comprehensive loss	—	—	—	—	—	—	—	(205,742)
Exercise of stock options and purchases under Employee Stock Purchase Plan	308,418	—	1,014	—	—	—	—	1,014
Amortization of deferred compensation				418	—	—	—	418
Issuance of common stock in connection with business combination	1,719,616	2	3,955	—	—	—	—	3,957
Balance at December 31, 2002	39,395,262	$ 39	$452,725	$(187)	$(112)	$ 501	$(344,717)	108,249
Net loss	—	—	—	—	—	—	(36,681)	(36,681)
Unrealized loss on available-for-sale securities	—	—	—	—	84	—	—	84
Translation adjustment	—	—	—	—	—	(195)	—	(195)
Comprehensive loss	—	—	—	—	—	—	—	(36,792)
Stock based compensation expense	8,423	—	33	—	—	—	—	33
Exercise of stock options and purchases under Employee Stock Purchase Plan	311,657	—	653	—	—	—	—	653
Amortization of deferred compensation	—	—	—	187	—	—	—	187
Adjustment of common stock issued in connection with business combination under escrow agreement	(150,000)	—	(315)	—	—	—	—	(315)
Balance at December 31, 2003	39,565,342	$ 39	$453,096	$ —	$ (28)	$ 306	$(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	26,374	—	42	—	—	—	—	42
Purchases under Employee Stock Purchase Plan	99,171	—	122	—	—	—	—	122
Restricted stock awards	707,000	1	616	(617)	—	—	—	—
Issuance of stock options to consultants	—	—	23	—	—	—	—	23
Amortization of restricted stock	—	—	—	52	—	—	—	52
Balance at December 31, 2004	40,397,887	$ 40	$453,899	$(565)	$(117)	$ 838	$(416,023)	$ 38,072

See accompanying notes.

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	Years ended December 31,		
	2004	2003	2002
Operating activities			
Net loss	$(34,625)	$ (36,681)	$(205,694)
Adjustments to reconcile net loss to net cash used in operating activities:			
Cumulative effect of accounting change	—	—	116,947
Stock-based compensation expense	23	33	—
In-process research and development	—	—	3,668
Amortization of deferred compensation	52	187	418
Depreciation and amortization	8,801	10,819	12,639
Impairment of goodwill and other assets and loss on disposal of fixed assets	1,891	44	33,450
Integration charge	—	—	3,000
Deferred taxes	(1,152)	(1,237)	(1,309)
Impairment of equity investment	—	—	1,000
Changes in operating assets and liabilities:			
Accounts receivable	1,088	3,972	2,651
Inventories	5,704	(2,158)	1,271
Other current assets	673	2,219	758
Other assets	(76)	280	741
Accounts payable and accrued expenses	(4,689)	(6,041)	(9,598)
Deferred revenue	(1,166)	(1,390)	(4,726)
Other liabilities	329	263	(230)
Net cash used in operating activities	(23,147)	(29,690)	(45,014)
Investing activities			
Purchase of equipment, leasehold improvements, and intangible assets	(2,898)	(2,356)	(5,538)
Cash acquired from business combination	—	—	568
Restricted cash	(208)	3,297	(8,730)
Investment in investee	—	—	(1,000)
Purchases of marketable securities	(60,208)	(197,971)	(97,005)
Sales of marketable securities	8,408	56,685	41,547
Maturities of marketable securities	67,076	164,851	58,712
Net cash (used in) provided by investing activities	12,170	24,506	(11,446)
Financing activities			
Repayment of long-term debt	(3,572)	(5,131)	(1,587)
Proceeds from long-term debt	—	2,200	12,219
Borrowings under capital lease obligations	—	—	—
Payments on capital lease obligations	(493)	(713)	(1,023)
Proceeds from exercise of warrants, stock options and Employee Stock Purchase Plan purchases	164	653	804
Net cash (used in) provided by financing activities	(3,901)	(2,991)	10,413
Net increase (decrease) in cash and cash equivalents	(14,878)	(8,175)	(46,047)
Effect of exchange rate changes on cash and cash equivalents	527	(233)	709
Cash and cash equivalents at beginning of year	17,940	26,348	71,686
Cash and cash equivalents at end of year	$ 3,589	$ 17,940	$ 26,348
Supplemental schedule of non-cash investing and financing activities:			
Fair value of net assets acquired under capital leases	$ 576	$ —	$ —
Fair value of net assets acquired for stock, less cash	$ —	$ —	$ 4,465
Supplemental disclosure of cash flow information:			
Interest paid	$ 434	$ 680	$ 408

See accompanying notes.

1. Nature of the Business

We are a genetics company committed to providing the best genetic analysis products that translate genomic science into superior solutions for molecular medicine and biomedical research. 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.

We are focusing our efforts on revenue-generating opportunities in the biomedical research market. In particular, we are focusing on molecular diagnostics, which encompasses clinical research and diagnostic applications. We will also continue our efforts to outlicense our disease gene discoveries (potential drug targets, diagnostic and pharmacogenetic markers, signaling pathways and novel biological mechanisms) for potential therapeutic or diagnostic product development by other parties and use our research results to improve the capabilities of our MassARRAY platform.

2. Summary of Significant Accounting Policies and Significant Accounts

Basis of Consolidation

The accompanying consolidated financial statements include the accounts of Sequenom, Inc. and our wholly owned subsidiaries located in Germany, Sweden, 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. 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 Emerging Issues Task Force ("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, 2004 approximately $1.4 million was accrued. The amount accrued at December 31, 2004 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 its 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.

Reserves for obsolete and slow-moving inventory

Inventory is carried at the lower of cost or market value, with cost determined by the first-in, first-out method. We estimate the recoverability of our inventory by reference to our internal estimates of future demands and product life cycles. We review inventory periodically and reduce the carrying value of items considered to be slow moving or obsolete to their estimated net book value. During 2004, slow-moving and other inventory reserves of $3.1 million were charged to cost of goods sold, and we held reserves of $3.2 million at December 31, 2004.

Cumulative effect of accounting change and asset impairment

Effective January 1, 2001, we adopted SFAS No. 142, which requires that goodwill and intangible assets deemed to have an indefinite useful life will no longer be amortized but will be reviewed for impairment upon adoption of SFAS No. 142 and annually thereafter. Upon adoption of SFAS No. 142, we recognized a non-cash charge of $116.9 million to reduce the carrying value of our goodwill. The charge is non-operational in nature and is reflected as a cumulative effect of an accounting change in the consolidated statement of operations. In calculating the impairment charge, the fair value was estimated using a discounted cash flow methodology, and the charge related entirely to the goodwill resulting from the acquisition of Gemini Genomics. We performed our annual impairment review on October 1, 2002 and recognized a non-cash charge of $25.0 million to write off the remaining goodwill from the acquisitions of Gemini Genomics and Axiom Biotechnologies. 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 internal drug discovery program.

Warranty 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.

Shipping and handling costs

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

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, 2004, 2003 and 2002. 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 commercial paper of prime quality, certificates of deposit, guaranteed bankers acceptance and US Government instruments, and by policy, limit the amount of credit exposure to any one issuer. At December 31, 2004, we had invested in no single financial instrument that represented a significant concentration of credit risk. At December 31, 2004, no investment held had a significant long-term, other-than-temporary unrealized loss.

At December 31, 2004, short-term investments consisted of the following:

	Amortized Cost	Unrealized Gain	Unrealized (Loss)	Market Value
		($ in thousands)		
Obligations of US government agencies	$ 3,511	$—	$ —	$ 3,511
U.S. corporate debt securities	17,072	4	(93)	16,983
International corporate debt securities	2,507	—	(17)	2,490
Certificates of deposit	1,453	—	(11)	1,442
Total short-term investments	$24,543	$ 4	$(121)	$24,426

Approximately 61% and 39% of these securities mature within one and two years of December 31, 2004, respectively.

At December 31, 2003, short-term investments consisted of the following:

	Amortized Cost	Unrealized Gain	Unrealized (Loss)	Market Value
		($ in thousands)		
Obligations of U.S. Government Agencies	$ 3,503	$ 3	$ —	$ 3,506
U.S. corporate debt securities	35,333	15	(38)	35,310
International corporate debt securities	876	—	—	876
Certificates of deposit	100	—	—	100
Total short-term investments	$39,812	$ 18	$ (38)	$39,792

Investments considered to be temporarily impaired at December 31, 2004 are as follows:

	No. of Inv.	Less than 12 months of temporary impairment		Greater than 12 months of temporary impairment		Total temporary impairment	
		Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
		(in thousands except for number of investments)					
Corporate obligations	42	$12,191	$(83)	$4,199	$(38)	$16,390	$(121)

We believe that the decline in value is temporary and related to the change in market interest rates since purchase. The decline is not related to any company or industry specific event, and all portfolio investments are rated A- or above by various rating agencies. We anticipate full recovery of amortized cost with respect to these securities at maturity or sooner in the event of a change in the market interest rate environment.

Restricted Cash

Restricted cash of $9.9 million as of December 31, 2004 is held in term deposits with restrictions of withdrawal, in support of certain borrowing agreements and stand-by letters of credit. Restricted cash totaled $9.7 million at December 31, 2003.

Concentration of Risks

We grant credit generally on an unsecured basis to customers throughout North America, Europe, and Asia. Trade accounts receivable are recorded at net invoice value. We consider receivables past due based on the contractual payment terms. We establish an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends, and other information. We also reserve a percentage of the net trade receivable balance based on collection history, and we re-evaluate our reserves on a regular basis and adjust the reserves as needed. Amounts later determined and specifically identified to be uncollectible are charged or written off against this reserve. Gross trade accounts receivables totaled $3.2 million and the allowance for doubtful accounts was $0.1 million at December 31, 2004. 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, 2004	Percent of receivable balance	December 31, 2003	Percent of receivable balance
		($ in thousands)		
Europe	$1,273	41%	$ 663	16%
Asia	622	20%	1,658	41%
North America	1,200	39%	1,755	43%
Total	$3,095	100%	$4,076	100%

Our Asia-based major distributors represented $4.9 million and $6.2 million, or 22% and 22% of our total product revenues during the year ended December 31, 2004 and 2003, respectively. One Asia-based distributor had a year-end accounts receivable balance of $0.3 million, or 11% of the total balance outstanding at December 31, 2004. One Asia-based distributor and one Asia-based academic institution made up $1.6 million or 40% of the accounts receivable balance at December 31, 2003. Our distribution contract with one distributor, representing $2.3 million of revenue in 2004, expired on December 31, 2004.

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:

	December 31,	
	2004	2003
	($ in thousands)	
Raw materials	$3,351	$ 8,159
Work in process	33	126
Finished goods	1,505	2,284
Total	$4,889	$10,569

Inventories are shown net of excess and obsolescence reserves of $3.2 million and $1.9 million at December 31, 2004 and 2003, 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,	
	2004	2003
	($ in thousands)	
Laboratory equipment	$ 15,222	$ 21,189
Leasehold improvements	4,261	4,322
Office furniture and equipment	6,202	6,123
	25,685	31,634
Less accumulated depreciation and amortization	(18,963)	(21,796)
	$ 6,722	$ 9,838

Depreciation expense for the years ended December 31, 2004, 2003 and 2002 was $5.1 million, $6.7 million, and $8.0 million respectively.

Intangible Assets

Intangible assets consisted of the following:

	Weighted Average Life	December 31, 2004 Gross Carrying Amount	December 31, 2004 Accumulated Amortization	December 31, 2003 Gross Carrying Amount	December 31, 2003 Accumulated Amortization
			($ in thousands)		
Clinical data collections	5	$13,552	$(10,169)	$16,110	$(7,250)
Purchased patent rights and licenses	5	$ 4,388	(3,028)	$ 4,895	(2,417)
Total		$17,940	$(13,197)	$21,005	$(9,667)

Amortization of intangible assets for the years ended December 31, 2004, 2003 and 2002 was $3.7 million, $4.0 million and $4.6 million, respectively. Estimated aggregate amortization expense for the next five years is as follows:

Year ended December 31,	$ in millions
2005	$ 2.5
2006	1.9
2007	0.2
2008	0.1
2009	—
	$ 4.7

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 income statement 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. In relation to the decline in revenues from genetic services and the progress of various internal research projects during the fourth quarter of 2002, 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 $10.8 million were no longer recoverable and were impaired, and wrote them down to their estimated fair value of $2.7 million. Fair value was based on discounted expected future cash flows to be generated by these assets. An impairment charge of $8.1 million was accordingly recorded for these assets. This charge is included within the income statement as a component of the line, "Impairment of goodwill and long-lived assets". These assets primarily included equipment, purchased patent rights, and software. There was no SFAS No. 144 impairment charge in 2003.

Consolidation of Variable Interest Entities

We have implemented the provisions of Financial Accounting Standards Board Interpretation ("FIN") No. 46, Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51, which addresses consolidation by business enterprises of variable interest entities either: (1) that do not have sufficient equity investment at risk to permit the entity to finance its activities without additional subordinated financial support, or (2) in which the equity investors lack an essential characteristic of a controlling financial interest. In November 2004, we signed a series of agreements to provide up to $0.1 million of cash, services or equipment to a development stage biopharmaceutical company seeking to develop curative pharmaceuticals for Type 2 Diabetes and associated diseases. We consider this entity to be a variable interest entity under the provisions of FIN 46. During 2004, we advanced approximately $78,000 in cash and equipment in exchange for a promissory note convertible into equity, pursuant to a qualified financing, as defined by the underlying agreements. To date, we have contributed the substantial portion of this entity's funding. We are not required to consolidate the entity's results of operations under FIN No. 46 as we are not the primary beneficiary and we have no obligation to fund additional material amounts. At December 31, 2004, the advance of $78,000 is included in other assets as the entity had not yet begun operations

Goodwill

Goodwill, which was primarily from our 2001 acquisition of Gemini Genomics, represented the excess of cost over the fair value of the net tangible and identifiable intangible assets purchased, and was determined to be partially impaired upon adoption of SFAS No. 142 in January 2002 and fully impaired in the subsequent annual review in the fourth quarter of 2002.

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. The carrying value of long-term debt approximates the fair value of the debt as the interest rates currently available to us from the same source of funding do not significantly differ from the rates reflected in the original agreement.

Revenue Recognition

In accordance with Staff Accounting Bulleting ("SAB") No. 101, "Revenue Recognition in Financial Statements", and the further guidance in 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 determined by vendor specific objective evidence. 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 over the duration of the software license or upon transfer of title to the customer. We recognize revenue allocated to maintenance fees for ongoing customer support over the maintenance period. Revenues from SNP validation

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.

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, 2004, 2003 and 2002.

Stock-Based Compensation

We account for our stock-based awards to employees in accordance with Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB 25") and the related Interpretation No. 44, "Accounting for Certain Transactions Involving Stock Compensation—An Interpretation of APB Opinion No. 25". We have adopted the disclosure-only alternative of SFAS 123, "Accounting for Stock-Based Compensation" ("SFAS 123"), as amended by SFAS 148, "Accounting for Stock-Based Compensation—Transition and Disclosure" ("SFAS 148").

When the exercise price of the employee or director stock options is less than the estimated fair value of the underlying stock on the grant date, we record deferred compensation for the difference and amortize this amount to expense in accordance with Financial Accounting Standards Board ("FASB") Interpretation No. 28, "Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans," over the vesting period of the options. No options were issued with an exercise price less than the estimated fair value in 2004, 2003 or 2002.

Had compensation cost for stock-based awards been determined consistent with the fair value method prescribed in SFAS No. 123, our net loss would have been changed to the following pro forma amounts:

	Years ended December 31,		
	2004	2003	2002
	($ in thousands, except per share information)		
Net loss as reported	$(34,625)	$(36,681)	$(205,694)
Add: Stock-based compensation expense included in reported net income	52	187	418
Deduct: Stock-based employee compensation expense determined under fair value based method for all awards	(3,019)	(4,782)	(7,149)
Pro forma net loss	$(37,592)	$(41,276)	$(212,425)
Net loss per share, basic and diluted, as reported	$ (0.87)	$ (0.93)	$ (5.39)
Pro forma net loss per share, basic and diluted	$ (0.95)	$ (1.05)	$ (5.57)

The fair value of stock-based awards and employee share purchases was estimated using the following assumptions:

	2004	2003	2002
Model	Black-Scholes	Black-Scholes	Black-Scholes
Risk free interest rates	4%	4%	4%
Volatility	72%	83%	99%
Dividend yield	0%	0%	0%
Weighted average life	6	4	4

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.

Equity Investments

We enter into certain equity investments for the promotion of business and strategic objectives. These investments are valued at the lower of historical cost or the current fair value in accordance with APB 18, "The Equity Method of Accounting for Investments in Common Stock". Our policy requires that these investments are periodically reviewed for impairments that are judged to be other than temporary. If we determine that the investment is impaired, we record an unrealized loss, which permanently reduces the cost basis of the investments. These unrealized losses are included in impairment of equity investment on the consolidated statements of operations. An equity investment of $1.0 million we made in 2002 is considered to be fully impaired and an impairment charge of $1.0 million was recorded in the year ended December 31, 2002 to reduce this investment to a carrying value of $0. Our other equity investment of approximately $78,000 is in a development stage biopharmaceutical company seeking to develop curative pharmaceuticals for Type 2 Diabetes and associated diseases. We do not consider this investment to be impaired at December 31, 2004.

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). A summary of our comprehensive loss is as follows (dollars in thousands):

	Years ended December 31,		
	2004	2003	2002
Comprehensive loss:			
Net loss applicable to common stock	$(34,625)	$(36,681)	$(205,694)
Change in unrealized gains (losses) on investments	(89)	84	(19)
Cumulative translation adjustments	532	(195)	(29)
Comprehensive loss	$(34,182)	$(36,792)	$(205,742)

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 total 3,265,488, and 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 November 2004, the FASB issued SFAS No. 151, "Inventory Costs, an amendment of ARB No. 43, Chapter 4." This statement amends the guidance in ARB No. 43 Chapter 4, "Inventory Pricing," to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). Paragraph 5 of ARB No. 43, Chapter 4, previously stated that " . . . under some circumstances, items such as idle facility expense, excessive spoilage, double freight, and rehandling costs may be so abnormal to require treatment as a current period charges . . ." This statement requires that those items be recognized as current-period charges regardless of whether they meet the criterion of "so abnormal." In addition, this statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the

production facilities. The provisions of this statement will be effective for inventory costs during the fiscal years beginning after June 15, 2005. We do not believe that the adoption of this statement will have a material impact on its financial condition or results of operations.

On December 16, 2004, the FASB issued SFAS No. 123 (revised 2004), "Share-Based Payment", which is a revision of SFAS No. 123, "Accounting for Stock-Based Compensation" (SFAS 123R). SFAS 123R supersedes APB Opinion No. 25, "Accounting for Stock Issued to Employees," and amends SFAS 95, "Statement of Cash Flows." Generally, the approach in SFAS 123R is similar to the approach described in SFAS 123. However, SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative. SFAS 123R must be adopted no later than July 1, 2005. Early adoption will be permitted in periods in which financial statements have not yet been issued. We expect to adopt SFAS 123R on July 1, 2005.

As permitted by SFAS 123, we currently account for share-based payments to employees using Opinion 25's intrinsic value method and, as such, generally recognize no compensation cost for employee stock options. Accordingly, the adoption of SFAS 123R's fair value method will have a significant impact on our result of operations, although it will have no impact on our overall financial position. The impact of adoption of SFAS 123R cannot be predicted at this time because it will depend on levels of share-based payments granted in the future and the assumptions for the variables which impact the computation. However, had we adopted SFAS 123R in prior periods, the impact of that standard would have approximated the impact of SFAS 123 as described in the disclosure of pro forma net income and earnings per share elsewhere in Note 2 to our consolidated financial statements.

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 SEQUENOM 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 the SEQUENOM Pharmaceuticals business segment, is 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. Business Combinations

In August 2002, we completed the acquisition of Axiom Biotechnologies, Inc., a privately-held company based in San Diego, California As a result of this transaction, we issued approximately 1.7 million shares of our common stock and assumed outstanding options and warrants, equivalent to approximately 250,000 additional shares of common stock. Of the 1.7 million shares relating to this transaction, 400,000 shares were placed in escrow, of which 250,000 were released from escrow on August 30, 2003. The remaining 150,000 shares were not issued due to indemnification obligations of Axiom Biotechnologies to SEQUENOM and the final purchase price was adjusted accordingly.

In connection with this transaction, we conducted a valuation of the intangible assets acquired in order to allocate the purchase price in accordance with Accounting Principles Board Opinion No. 16. The total purchase price of $5.0 million was allocated as follows ($ in millions):

Net tangible assets acquired	$0.4
In-process research and development	3.7
Intangible assets	0.5
Other	0.4
	$5.0

The intangible assets were being amortized over their estimated useful lives of five years and were categorized as patent rights and licenses. As a result of the decision to end internal drug development, the remaining value of these intangible assets of $0.3 million was considered impaired during 2004 and recorded as part of the income statement line, "Restructuring and long-lived asset impairment charge". At the time of acquisition, the technological feasibility of the acquired in-process research and development had not yet been established and management determined that at that time the technology had no future alternative uses and accordingly, the value assigned to in-process research and development was immediately charged to the statement of operations.

5. Acquisition and Integration Costs

As of December 31, 2004, we had $1.4 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, $0.3, and $0.2 million for the years ended December 31, 2004, 2003 and 2002, respectively. We charged $0.4 million to general and administrative expenses in 2004 to increase the existing accrual to cover all 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, 2004 and 2003, respectively, was as follows:

	Balance at December 31, 2003	Increase in accrual	Deductions	Balance at December 31, 2004
		($ millions)		
Costs to close facilities and exit lease commitments	1.4	0.4	(0.4)	1.4

	Balance at December 31, 2002	Reversals of Axiom accruals to income statement	Reclassification of Gemini Genomics accrual	Deductions	Balance at December 31, 2003
Direct costs of the acquisition	$0.2	$—	$(0.2)	$—	$—
Costs to close facilities and exit lease commitments	3.3	—	0.3	(2.2)	1.4
Severance, retention and related employee charges	0.3	(0.2)	—	(0.1)	—
Contract termination costs	0.1	—	(0.1)	—	—
	$3.9	$(0.2)	$—	$(2.3)	$ 1.4

6. Restructuring charge

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. The exit costs for this restructuring during the period are as follows (dollars in millions):

	Balance at January 1, 2004	Costs incurred and charged to expense	Costs paid or settled	Write-offs	Balance at December 31, 2004
Impairment of long-lived assets (note 2)	$—	$1.4	$—	$(1.4)	$—
One-time termination benefits	—	0.7	(0.7)	—	—
Contract termination costs	—	0.1	(0.1)	—	—
Total	$—	$2.2	$(0.8)	$(1.4)	$—

Exit costs relating to the restructuring are shown in the income statement in the line item "Restructuring charges and impairment of long-lived assets and goodwill."

7. Long-Term Debt

We have a credit agreement with a financial institution that provides for additional borrowings of up to $4.4 million. Borrowings under the agreement are secured by cash and cash equivalents and bear interest at one month LIBOR + 1.25% or 3.46% and 2.62% at December 31, 2004 and 2003, respectively. As of December 31, 2004, and 2003, respectively, $6.3 million and $8.6 million was outstanding under this agreement and was secured by our cash and cash equivalents. Repayments under this agreement are made in 36 monthly installments commencing three months after drawdown on the loan line. The final payments on existing debt will become due in January 2008.

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, 2004 and 2003, respectively, $1.4 and $2.7 million was outstanding under this agreement. Repayments under this agreement are made in between 36 and 42 monthly installments, dependent upon the asset backing the borrowing. At September 30, 2004, we were in breach of one of the covenants of this loan requiring us to have in excess of $40 million of unrestricted cash and short-term investments. We remedied the breach by providing the lender with a letter of credit for $0.9 million. At December 31, 2004, this loan line was secured by our tangible fixed assets with an initial cost of $4.0 million and a net book value of approximately $0.3 million, and by a stand-by letter of credit of $0.9 million. The final payments on existing debt are due in December 2006.

The following is a schedule of principal repayments due under our credit agreement and loan line ($ in thousands):

Year Ending December 31,	Principal repayments
2005	$3,320
2006	2,348
2007	2,005
	$7,673

8. Commitments and Contingencies

Building Leases

We lease facilities in the United States, Germany, and the United Kingdom. In total, we lease space in five buildings under leases that expire from June 2005 to December 2015. Total rent expense under these leases was approximately $4.2 million, $3.9 million, and $3.8 million in 2004, 2003, and 2002, respectively.

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. At December 31, 2004, we had borrowed $2.5 million under this agreement. No further amounts are available for borrowing under this agreement.

Equipment under capital leases is included in equipment and leasehold improvements, as follows:

	December 31,	
	2004	2003
	($ in thousands)	
Laboratory equipment	$ 2,570	$ 3,295
Office furniture and equipment	162	168
	2,732	3,463
Less accumulated amortization	(2,495)	(3,257)
	$ 237	$ 206

Depreciation of assets held under capital lease is included within total depreciation expense in Note 2.

The following is a schedule of future minimum lease payments at December 31, 2004:

Year Ending December 31,	Capital Leases	Operating Leases
	($ in thousands)	
2005	$ 421	4,606
2006	199	4,494
2007	—	4,580
2008	—	4,716
2009	—	4,868
Thereafter	—	27,205
	620	$50,469
Less amount representing interest	(29)	
Present value of minimum lease payments	591	
Less current portion	(397)	
Long-term capital lease obligations	$ 194	

The above operating leases expire at various dates through 2015. Certain leases contain extension, return, renewal for two years at existing lease rates and/or purchase options. Future operating lease commitments for leases have not been reduced by minimum sublease rentals aggregating $1.6 million.

Letters of Credit

At December 31, 2004, we had outstanding stand-by letters of credit with financial institutions totaling $2.1 million, of which $0.9 million related to our asset-backed loan and lease agreements with the same lender and $1.2 million related to our building and operating leases. These letters of credit will not be drawn down unless we default upon our obligations under the respective agreements. The $0.9 million letter of credit will reduce in line with the amount owing under our obligations, and will be released by the end of September 2006. The operating lease letter will remain in place until the expiry of the building lease agreement in December 2010.

Collaboration, Development, and Licensing Agreements

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, 2003, and 2004, the amount of royalties incurred in connection primarily with product sales was $0.0 million and $0.9 million, respectively. No significant royalty amounts were incurred in the year ended December 31, 2002.

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 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 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. On February 15, 2005, the 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 addition, the settlement is still subject to statutory notice requirements as well as final judicial approval. Management does not anticipate that the ultimate outcome of this event will have a material adverse impact on our financial position.

In August 2004, we were named as a defendant in a complaint filed by a former employee, Daniel P. Little ("plaintiff") in the United States District Court for the Southern District of California, Case No. 04 CV 1737 J. In the complaint, the plaintiff alleges that the we have violated plaintiff's rights under a 1957 German law, known as "Law Relating to Inventions Made by Employees", in connection with plaintiff's activities in Germany for Sequenom, GmbH, beginning in or about October 1995. This law provides for compensation to an employee in consideration for rights to employee inventions. Although we have made several royalty payments to plaintiff, plaintiff alleges that the amount of royalty has been in dispute as have been the triggering events. Plaintiff asserts causes of action against us including rescission, breach of contract, quantum meruit, unfair business practices, and fraud. Plaintiff further alleges that Sequenom GmbH failed to follow the mandatory process of the 1957 German law and never provided the necessary written claim of ownership of the inventions made by plaintiff while in Germany. The plaintiff seeks unspecified monetary damages and other relief including ownership and patent rights for all inventions claimed in patents to which he contributed while employed in Germany, including U.S. Patents 6,258,538, 6,569,385, and 6,602,662, which are asserted to include coverage for key elements of our MassARRAY technology, among other patents. In November 2004, the Court dismissed plaintiff's quantum meruit, unfair business practices, and fraud claims. In November 2004, we answered the complaint, denying all material allegations, and we intend to defend the action vigorously. Management does 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.

9. Related Party Transactions

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

- Provid Pharmaceuticals. We invested $1.0 million in an equity holding with Provid Pharmaceuticals and entered into a research agreement with them under which we paid approximately $375,000 in 2002 and $125,000 in 2003. No payments were made in 2004. Dr. Kris Venkat was a member of our Board and also a member of the Board of Provid Pharmaceuticals. Additionally, one of our board members, Dr Charles Cantor, is a member of Provid's Scientific Advisory Board. The carrying value of this investment is zero.
- GSF. Dr. Ernst-Gunter Afting is a member of our Board and the Managing Director of GSF in Germany. During the years ended December 31, 2004, 2003, and 2002, we sold MassARRAY hardware and associated products totaling $0.6 million, $0.9 million and $0.3 million to GSF.
- 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 research agreements with Boston University in which Dr. Cantor participates under which we paid $0.3 million, $0.3 million, and $0.2 million, and we recorded product revenue for MassARRAY hardware and consumables, totaling $0.2 million, $0.3 million and $0.2 million in the years ended December 31, 2004, 2003 and 2002, respectively. We also have loaned Boston University a MassARRAY system for use in their research programs.
- Dr. Hixson is the chairman of our board and was CEO and a board member of Elitra Pharmaceuticals. During 2004, we purchased certain tangible assets from Elitra for approximately $24,000.

At December 31, 2004, we had the following receivable and payable balances with the above related parties (in $ thousands):

Related party	Receivables	Payables
Provid	$—	$—
GSF	59	—
Boston University	30	78
Elitra Pharmaceuticals	—	—
Total	$ 89	$ 78

At December 31, 2003, we had the following receivable and payable balances with the related parties (in $ thousands):

Related party	Receivables	Payables
Provid	$—	$—
GSF	48	—
Boston University	24	15
Total	$ 72	$ 15

10. Stockholders' Equity

Stock Compensation Plans

We maintain several stock option plans under which we may grant incentive stock options and non-qualified stock options to employees, consultants and non-employee directors. Options vest and expire according to terms established at the grant date. Options generally vest over a period four years from the date of grant and expire ten years from the date of grant. The plans provide for the grant of an aggregate of 4,750,000 shares of common stock. Beginning in 2001, the amount of authorized shares automatically increases by an amount equal to 4% of the outstanding common stock on the last trading day of the prior year, subject to an annual increase limitation of 2,000,000 shares.

The following summarizes all stock option transactions from January 1, 2002 through December 31, 2004.

Outstanding	Shares Subject to Options	Weighted Average Exercise Price per Share
Outstanding at December 31, 2001	2,146,981	$11.61
Options assumed in connection with acquisition of Axiom Biotechnologies	225,772	4.41
Granted	2,997,843	4.35
Canceled	(509,005)	9.97
Exercised	(210,943)	2.85
Outstanding at December 31, 2002	4,650,648	$ 7.24
Granted	1,951,550	2.64
Canceled	(932,695)	5.89
Exercised	(216,605)	2.35
Outstanding at December 31, 2003	5,452,898	$ 5.94
Granted	844,500	2.26
Canceled	(1,135,932)	5.23
Exercised	(26,374)	1.61
Outstanding at December 31, 2004	5,135,092	$ 5.39

At December 31, 2004, 1,790,875 shares were available for future option grants and 6,925,967 shares of common stock were reserved for issuance upon exercise of options.

The weighted average grant-date fair value of options granted in 2004, 2003 and 2002 was $1.68, $1.84, and $3.39, respectively.

The following table summarizes information about options outstanding at December 31, 2004:

	Options Outstanding			Options Exercisable	
Range of Exercise Price	Number Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable and Vested	Weighted Average Exercise Price
$0.05-$2.92	2,418,943	8.2	$ 2.32	1,082,896	$ 2.34
$3.70-$4.89	1,879,505	6.5	$ 4.25	1,425,880	$ 4.37
$6.38-$35.00	836,644	6.2	$16.81	717,025	$17.77
$0.05-$35.00	5,135,092	7.3	$ 5.39	3,225,801	$ 6.67

Restricted Stock Awards and Deferred Compensation

During the year ending December 31, 2004, we issued 736,500 shares of restricted stock awards with a weighted average grant date fair value of $0.87 per share to certain executive officers and employees. The awards vest one year from the grant date. The deferred compensation for these restricted stock awards is 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 stock-based compensation expense over the vesting period of the restricted stock. For the years ending December 31, 2004, 2003 and 2002, we recognized approximately $52,000, $0.2 million, and $0.4 million of amortization of deferred compensation expense, respectively. At December 31, 2004, there was $0.6 million remaining in unamortized deferred compensation which will be recognized in 2005.

Option Exchange Program

On November 30, 2001, we completed the offering of a voluntary stock option exchange program to our employees, officers and board members. Under the program, participants were able to tender for cancellation stock options with an exercise price of at least $10 per share for an equal number of replacement options to be granted at least six months and one day from the cancellation under certain terms and conditions as set forth in our offer. The exercise price of the replacement options was equal to the market price of SQNM common stock on the replacement option grant date. The terms and conditions of the replacement options, including the vesting schedules, was substantially the same as the terms and conditions of the options cancelled. We accepted options to purchase approximately 1.2 million shares of SQNM stock for exchange pursuant to this program. On May 31, 2002, we issued approximately 1.2 million options with an exercise price of $4.89 to complete the program. In accordance with FIN44, variable accounting was not required as the individual option holders were subject to market risk for a six month period.

Employee Stock Purchase Plan

In 1999, we adopted the 1999 Employee Stock Purchase Plan ("1999 ESPP"). As of December 31, 2004, we had reserved 1,292,981 shares of common stock for issuance under the 1999 ESPP. Beginning in 2001, the amount of authorized shares available under the 1999 ESPP automatically increase 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 500,000 shares. The 1999 ESPP will have a series of concurrent offering periods, each with a maximum duration of 24 months, however, no employee may participate in more than one offering period at a time. Employees may allocate up to 15% of their pay to purchase shares, limited to 1,000 shares per purchase period and $25,000 per calendar year. Shares are purchased semi-annually at 85% of the lower of the

beginning or end of the period price. For the years ended December 31, 2004 and 2003, respectively, 99,171 and 103,475 shares were purchased by employees at an average price of $1.23 and $1.38 per share, respectively. At December 31, 2004, there were 34,843 shares which were allocated and committed to be released at the next ESPP plan purchase date.

Warrants

In connection with the acquisition of Axiom Biotechnologies, the outstanding warrant to purchase 22,000 Axiom ordinary shares at an exercise price of $3.50 was adjusted to be exercisable for 4,604 shares of Sequenom Common Stock at an exercise price of $16.73 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 106,508 shares of Series C Preferred Stock at an exercise price of $3.15 per share. These warrants converted to purchase Sequenom Common Stock upon our initial public offering. These warrants expire in May 2007. As of December 31, 2004, 35,083 of these warrants remain outstanding.

11. 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,		
	2004	2003	2002
	($ in thousands)		
Tax at statutory rate	$(12,522)	$(13,271)	$(71,908)
State taxes, net of Federal benefit	(2,089)	(2,179)	(8,437)
Change in valuation allowance	15,970	14,701	31,321
Goodwill write-off	—	—	49,685
Credits & Other	(2,511)	(488)	(1,970)
	$ (1,152)	$ (1,237)	$ (1,309)

The 2004, 2003 and 2002 income tax benefit of $1.2 million, $1.2 million and $1.3 million, respectively, 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 valuation allowance of $116.5 million has been recorded at December 31, 2004, as realization of such assets has not met the more likely than not threshold in accordance with SFAS No. 109.

	December 31,	
	2004	2003
	($ in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 95,899	$ 79,869
Research tax credits	10,942	8,372
Capitalized research expenses	4,322	6,177
Capital loss carryforward	1,003	1,003
Other, net	4,321	5,096
Total deferred tax assets	116,487	100,517
Valuation allowance against deferred tax assets	(116,487)	(100,517)
Deferred tax liabilities:		
Intangible Assets	(1,627)	(3,674)
Net deferred tax assets (liabilities)	$ (1,627)	$ (3,674)

At December 31, 2004, we have federal and state tax net operating loss carryforwards of approximately $212.8 million and $105.4 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 $4.9 million of the state tax loss carryforwards will expire in 2005 and the remaining state tax loss carryforwards will continue to expire in 2006 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 $11.5 million and $35.6 million, respectively, at December 31, 2004, which may be carried forward indefinitely.

Approximately $32.0 million of the UK net operating loss carryforwards was acquired with the purchase of Gemini Genomics and is fully reserved by the valuation allowance. Approximately $2.4 million and $5.8 million of federal and state net operating loss carryforwards, respectively, were acquired with the purchase of Axiom and are fully reserved by the valuation allowance. To the extent these 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 $0.8 million related to stock option deductions, which, if recognized, will be allocated to additional paid in capital.

We also have federal and state research tax credit carryforwards of approximately $6.9 million and $6.1 million, respectively at December 31, 2004. The federal research 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 UK 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.

12. 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 matching contributions totaling approximately $0.2 million, $0.2 million and $0.3 million in 2004, 2003 and 2002, respectively.

13. 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, 2004 2003, and 2002:

	December 31,		
	2004	2003	2002
Current assets:			
United States	$ 37,386	$ 70,807	$ 105,090
Europe	3,500	6,524	8,170
Asia	622	1,657	1,083
	$ 41,508	$ 78,988	$ 114,343
Property, equipment and leasehold improvements, net:			
United States	$ 5,581	$ 9,065	$ 14,842
Europe	866	491	624
Asia	275	282	460
	$ 6,722	$ 9,838	$ 15,926
Other assets:			
United States	$ 10,256	$ 16,110	$ 22,339
Total assets:			
United States	$ 53,222	$ 95,982	$ 142,271
Europe	4,367	7,015	8,794
Asia	897	1,939	1,543
	$ 58,486	$104,936	$ 152,608
Revenues:			
United States	$ 10,772	$ 14,586	$ 18,599
Europe	5,027	8,225	6,447
Asia	6,650	7,441	5,839
	$ 22,449	$ 30,252	$ 30,885
Net loss:			
United States	$(23,881)	$ (28,889)	$(196,697)
Europe	(4,875)	(3,732)	(3,396)
Asia	(5,869)	(4,060)	(5,601)
	$(34,625)	$ (36,681)	$(205,694)

14. Selected Quarterly Financial Data (unaudited)

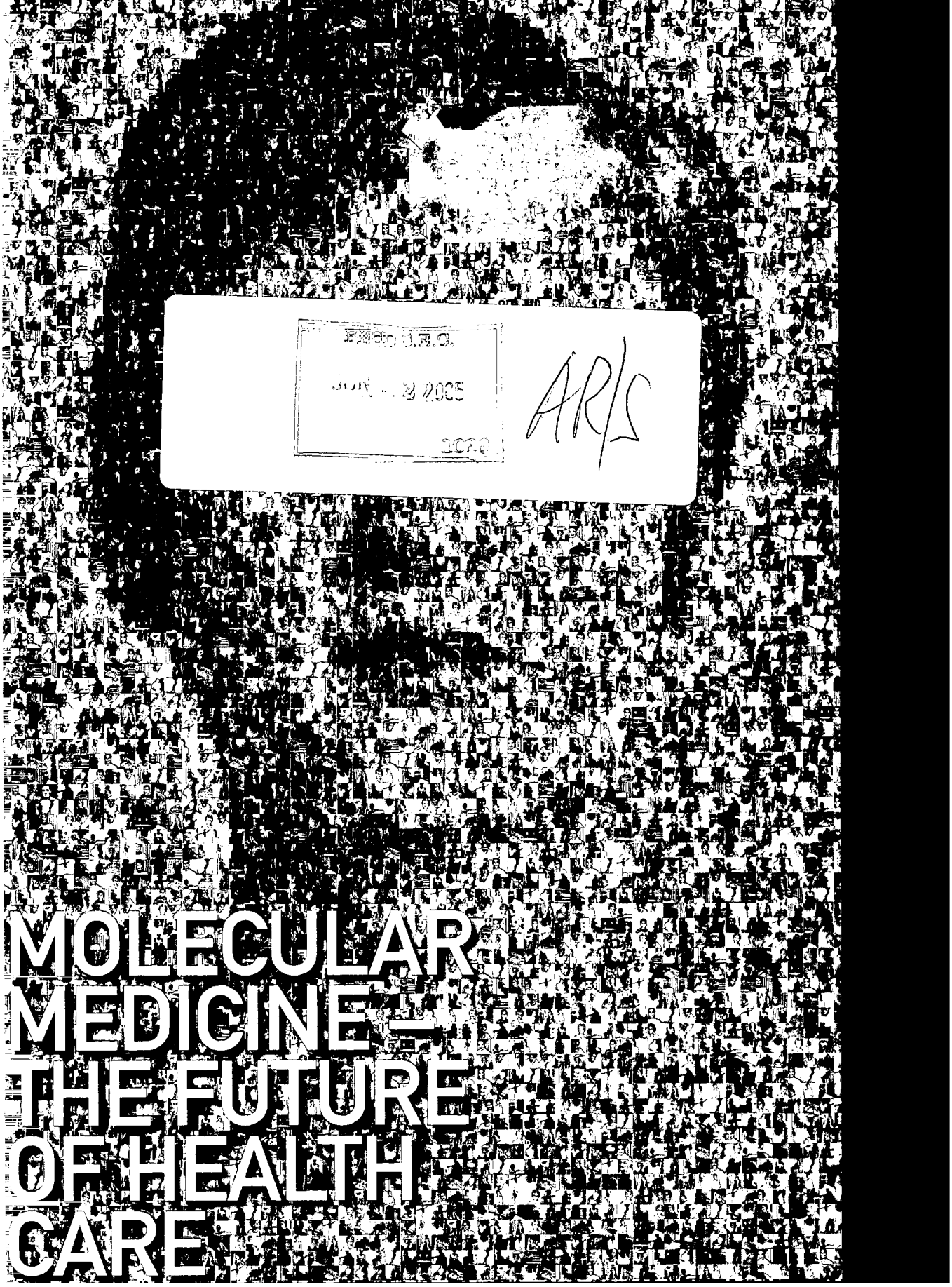
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
	(Dollars in thousands, except per share information)				
2004					
Net sales	$ 5,134	$ 5,975	$ 5,245	$ 6,095	$ 22,449
Cost of product and service revenue	2,965	3,536	2,469	2,391	11,361
Net income (loss)	(9,885)	(9,868)	(8,304)	(6,568)	(34,625)
Net income (loss) per share, basic and fully diluted	$ (0.25)	$ (0.25)	$ (0.21)	$ (0.16)	$ (0.87)
Shares used in calculated per share amounts, historical, basic and fully diluted	39,615	39,644	39,674	39,944	39,720
2003					
Net sales	$ 7,443	$ 7,654	$ 7,156	$ 7,999	$ 30,252
Cost of product and service revenue	3,966	4,621	3,853	4,649	17,089
Net income (loss)	(8,545)	(9,340)	(8,814)	(9,982)	(36,681)
Net income (loss) per share, basic and fully diluted	$ (0.22)	$ (0.24)	$ (0.22)	$ (0.25)	$ (0.93)
Shares used in calculated per share amounts, historical, basic and fully diluted	39,431	39,449	39,532	39,534	39,487

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, 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
Warranty reserve	265	839	799[3]	305
Year ended December 31, 2003:				
Allowance for doubtful accounts	$ 569	$ —	$ 121[1]	$ 448
Reserve for obsolete or excess inventory	1,110	2,361	1,581[2]	1,890
Warranty reserve	392	932	1,059[3]	265
Year ended December 31, 2002:				
Allowance for doubtful accounts	$ 482	$ 156	$ 69[1]	$ 569
Reserve for obsolete or excess inventory	462	1,055	407[2]	1,110
Warranty reserve	365	537	510[3]	392

(1) Write off of uncollectible accounts
(2) Write off of obsolete or excess inventory
(3) Warranty items shipped to customers



SEQUENOM

2004 Annual Report

SEQUENOM IS COMMITTED TO PROVIDING THE BEST GENETIC ANALYSIS PRODUCTS TO TRANSLATE GENOMIC SCIENCE INTO MOLECULAR MEDICINE.

Statements in this report that are not historical are forward-looking statements within the meaning of Section ... 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 the Annual Report on Form 10-K for the year ended December 31, ... that could cause actual results to differ materially from those anticipated in the forward-looking statements. In addition 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's MassARRAY® technology is enabling the development of molecular tests that have never before been possible, bringing cutting-edge research into clinical reference and hospital laboratories. The expectation is that these tests will have an enormous impact on health care, replacing time-consuming, expensive, and less accurate procedures with faster, comparatively inexpensive, and more accurate non-invasive tests.

Leading research institutions and clinical research laboratories are using our MassARRAY systems to develop new genetic tests that should deliver high diagnostic value to physicians and patients. These could include tests that offer earlier and better detection of osteoporosis and macular degeneration—two diseases that afflict a majority of people older than 60 years.

INTRODUCING MassARRAY TO THE CLINIC

Our customers are leveraging the specificity and sensitivity of our MassARRAY technology to identify new genetic markers, particularly for cancer. Progress is being made in using these markers as assays to measure disease progression and therapeutic response—situations that vary greatly from patient to patient.

Our focus on establishing a connection between human genetics and the practice of medicine is behind our creation of a global network of clinical partnerships. More than 10 partnerships have been established, including Boston University, Women's Hospital of Basel, and Columbia University, where research has begun on genetic markers for cancer and prenatal testing. The goal of these partnerships is to develop clinical diagnostic tests.

The joint working group we established with Siemens Medical Solutions now includes Specialty Laboratories, one of the largest clinical reference laboratories in the United States. The focus of our partnership with Siemens, a leading provider of medical systems, is to benchmark our MassARRAY Compact system against existing systems and platforms for the molecular medicine market. Also, several of the assays we have developed are being benchmarked, including genetic tests for deep vein thrombosis, cystic fibrosis, and HIV.

These partnerships are creating a bridge between academic and clinical research, one that is built upon the reference-level accuracy and quality of our MassARRAY systems. Together with our partners, we are focused on deriving clinical meaning and value from genetic discoveries and fostering the creation of molecular medicine.

"SEQUENOM's MassARRAY system has potential as a single genetic analysis platform capable of performing multiple clinically valuable molecular diagnostic tests in a high-volume clinical laboratory environment."

– MOHAMMAD NARAGHI, M.D., PH.D., SIEMENS


superior technology
SEQUENOM
MassARRAY
Nanodispenser

scientific advances

The mystery of genes and their impact on human health is being solved. Through scientific efforts like the Human Genome Project and with enabling technologies such as our MassARRAY® system, researchers are examining the potential role each and every gene in the human genome plays in human disease. The identification of gene markers is fueling a radical transformation in health care with the ultimate goal of delivering personalized medicine.

New genetic information is being put into clinical practice in the form of gene-based molecular tests. These tests will form the basis of molecular medicine and ultimately will help physicians improve patient outcomes.

GENE-BASED MEDICINE

Gene-based molecular tests will allow physicians to more accurately predict and diagnose life-threatening diseases, and monitor the response to therapies more effectively. These tests also offer a less expensive, non-invasive alternative to existing tests and deliver faster, more definitive results.

Our MassARRAY systems act as a technology bridge, linking the discovery efforts being performed in universities and institutes with the clinical research conducted in hospitals and clinical reference laboratories. The high precision and throughput of our MassARRAY technology makes it a valuable analysis platform for the discovery and validation of genetic markers. Through our own efforts, we have discovered more than 60 genes associated with 11 major disease areas, including four types of cancer.

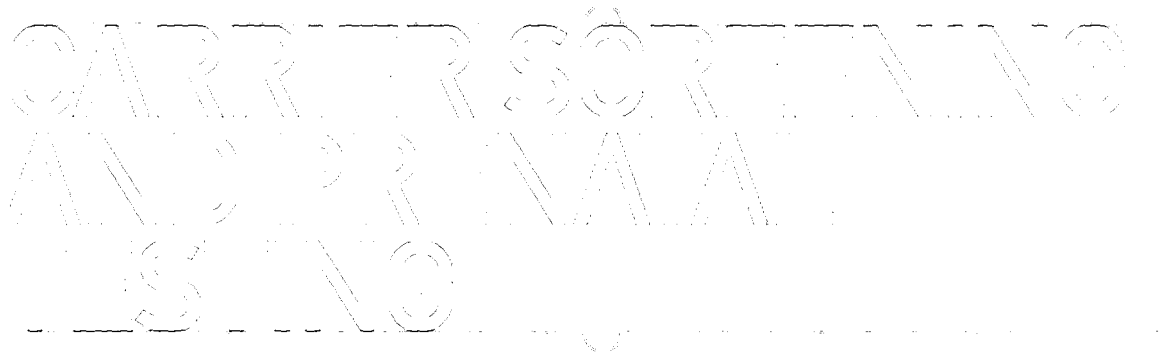
Discovering gene markers, whether they identify genetic risk, disease progression or therapeutic response, can be challenging. But once known, these gene markers can be turned into gene-based tests and analyzed on our MassARRAY Compact system. While our Compact system retains the consistent reliability, sensitivity and specificity of our first MassARRAY system, it has one-third of the footprint of our original system. Its small size belies its versatility in performing multiple testing applications and its use as a cost-effective workhorse for clinical research. We believe that our MassARRAY Compact system along with its reagent and chip revenue stream will enable us to expand into the growing clinical research laboratory market. This market is five times the size of the academic research market into which we launched our first MassARRAY system.

Personalized medicine will evolve over the next decade as molecular markers are identified and molecular tests are developed. These tests will cover a broad range of molecular medicine applications, from disease predisposition testing and diagnostics, to cancer subtyping and non-invasive prenatal testing. Some tests even will become the first molecular tools for monitoring a patient's response to therapy. In satisfying the physician's desire to tailor health care to the individual, these tests should fulfill the promise of molecular medicine—to deliver better health care to people around the world.

< *Our MassARRAY system is a high-performance DNA analysis platform that efficiently and precisely measures the amount of genetic target material in a sample as well as any variations or mutations. The system delivers high data quality from complex biological samples, even when only trace amounts of the genetic target material can be found.*

SEQUENOM customers have made significant advances in the field of carrier screening and prenatal testing due to the sensitivity and specificity of our MassARRAY® Compact system. The ability of this system to deliver reference-level accuracy makes it a well-suited addition to a clinical laboratory where high data quality is imperative to make the best clinical decision.

At the Baylor College of Medicine, clinical researchers have used our MassARRAY Compact system to develop a cystic fibrosis (CF) testing panel, enabling physicians in the Houston area to test CF patients more accurately than with previous tests. The panel also is useful in carrier screening of potential parents for the presence of CF mutations. CF is a



genetic disease that affects approximately 30,000 people in the United States and is caused by a defect in the cystic fibrosis transmembrane conductance regulator gene.

The research team in Baylor's Medical Genetics Laboratory has used our MassARRAY system to identify new CF markers as well as validate previously known ones. In 2004, the team's results contributed to the American College of Medical Genetics' revision of its testing guidelines for CF.

Our MassARRAY Compact system also is being used in prenatal testing where its high sensitivity and specificity enables the performance of genetic trace analyses — such as the identification of low levels of fetal DNA and RNA in the blood plasma of pregnant women. At the Chinese University of Hong Kong, clinical researchers are using the system to develop less expensive, non-invasive prenatal tests for detecting diseases such as beta-thalassemia. Currently, the only way to identify at-risk pregnancies for this life-threatening disease, which is prevalent in Southeast Asia, is to perform amniocentesis or chorionic villus sampling. With our MassARRAY Compact system, researchers have been able to detect the four most common beta-thalassemia mutations in at-risk pregnancies between 7 and 21 weeks of gestation.

Our MassARRAY Compact system is currently enabling further research and development of prenatal diagnostic panels for cystic fibrosis as well as for chromosomal disorders such as Down syndrome. Prenatal testing represents an attractive future market opportunity, one we will be pursuing with our partners.

"We believe SEQUENOM's MassARRAY technology will greatly expand the range of disorders amenable for non-invasive prenatal testing and create a new standard of data quality and reliability in the field of prenatal diagnostics."

– PROFESSOR DENNIS LO, CHINESE UNIVERSITY OF HONG KONG

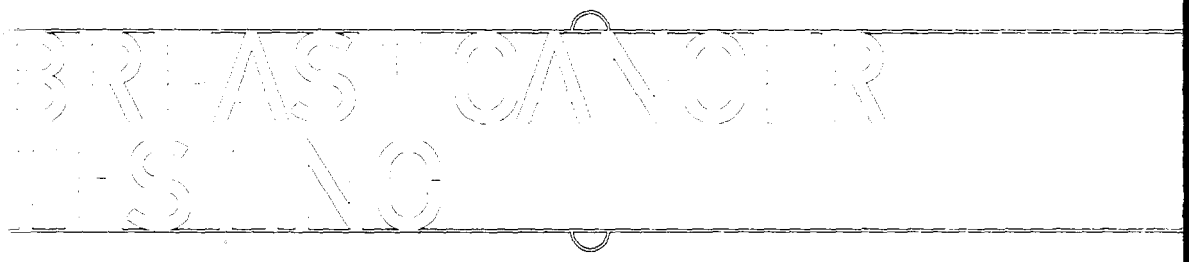
Personalized Medicine

"SEQUENOM's MassARRAY has enabled us to evaluate each patient's CF mutation status in a very sensitive and specific manner, and helped to advance our clinical research in this area."

– BENJAMIN ROA, PH.D., BAYLOR COLLEGE OF MEDICINE

The versatility of our MassARRAY® system is enabling us to take the results of our own genetic analysis efforts—linking gene markers and disease—and apply them to the development of new prognostic and diagnostic molecular tests.

We reported the discovery of gene markers that appear to significantly increase a patient's risk for developing breast or prostate cancer. We believe these may be the most important findings in cancer genetics since the 1995 discovery of BRCA genes. The study reported that individuals with the deleterious version of the ICAM gene region have a 40% higher risk of developing breast or prostate cancer compared to those without it. The data also demonstrated that the



breast cancer risk increases significantly in those females with a family history of breast cancer. Further, since ICAMs are cell surface molecules, they have the potential to offer new therapeutic opportunities for both breast and prostate cancer, the most common cancers in women and men, respectively.

One of our goals is to develop a diagnostic panel that will work in the general population to identify patients at risk of developing breast or prostate cancer and to help physicians treat these diseases more effectively. We already have begun studies to validate the role our gene markers play in the predisposition, disease onset, progression, and therapeutic response in breast cancer. These gene markers ultimately could be turned into diagnostic panels for use in clinical laboratories. An important step prior to launching a diagnostic panel will be to develop analyte specific reagents (ASRs) for use by CLIA-certified clinical laboratories.

Because of its ability to perform multiple applications, we believe our MassARRAY Compact system is well suited for clinical genetic analysis, particularly for cancer research and the development of cancer diagnostics. While current molecular diagnostics for cancer focus on comparative DNA analyses, future tests likely will combine DNA and RNA analyses within the same panel. The ability of one system to perform these analyses should provide clinical reference laboratories with a more efficient and cost effective method of conducting these new tests.

"We're staking a position in the area of genetic cancer research and intend to develop a diagnostic panel incorporating the breast cancer markers we've identified using our MassARRAY system."

– ANDREAS BRAUN, M.D., PH.D., SEQUENOM

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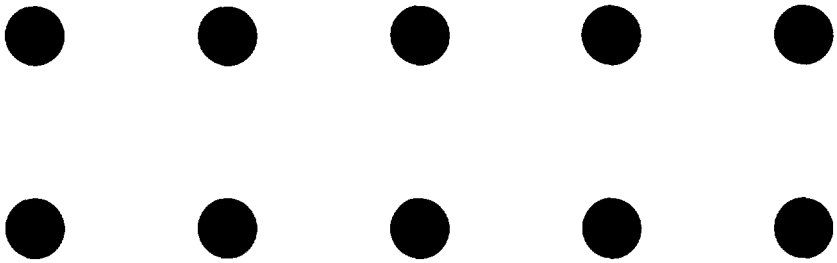
SEQUENOM®



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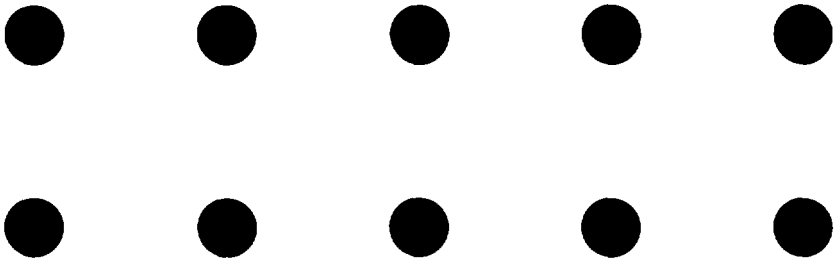


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