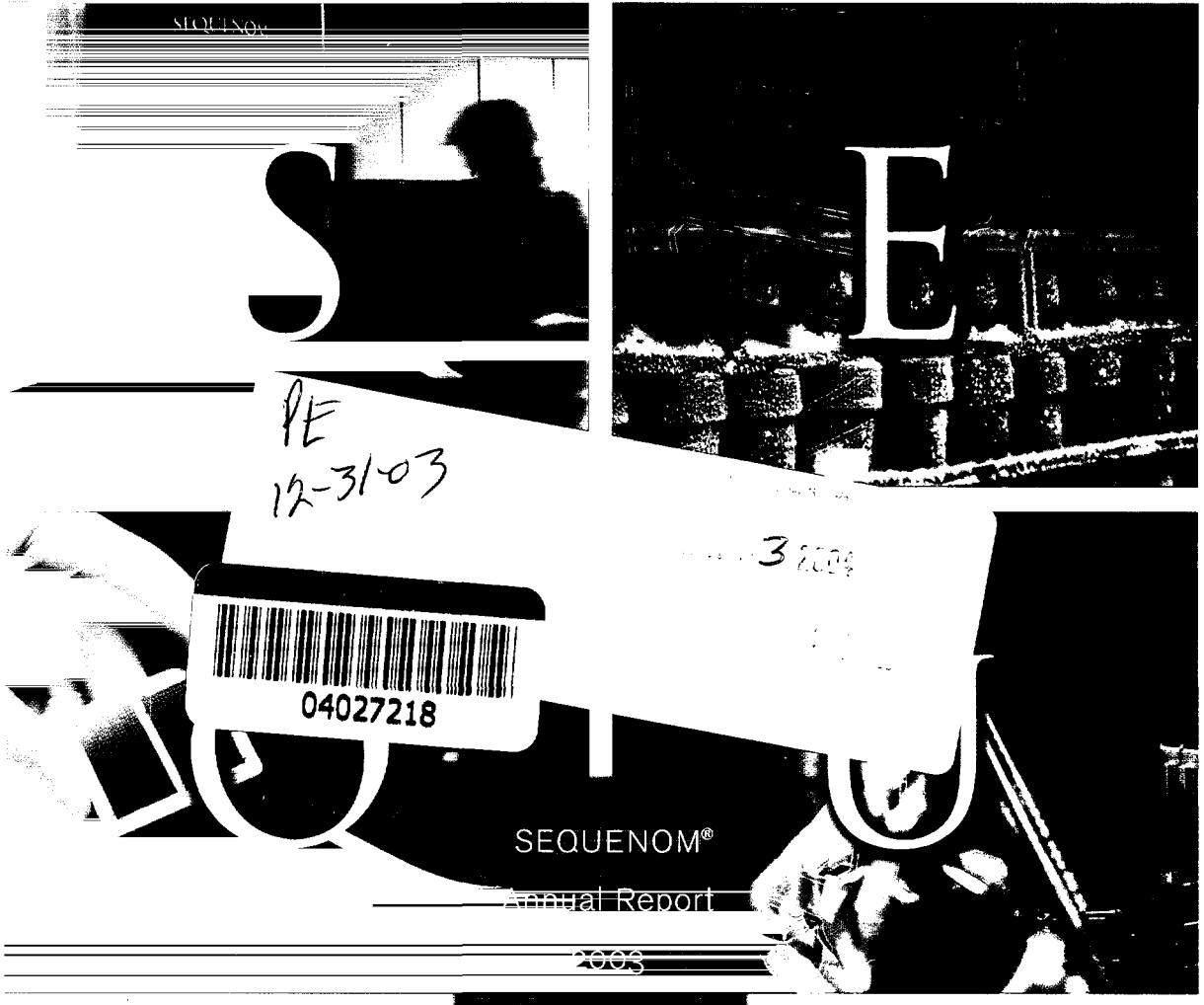
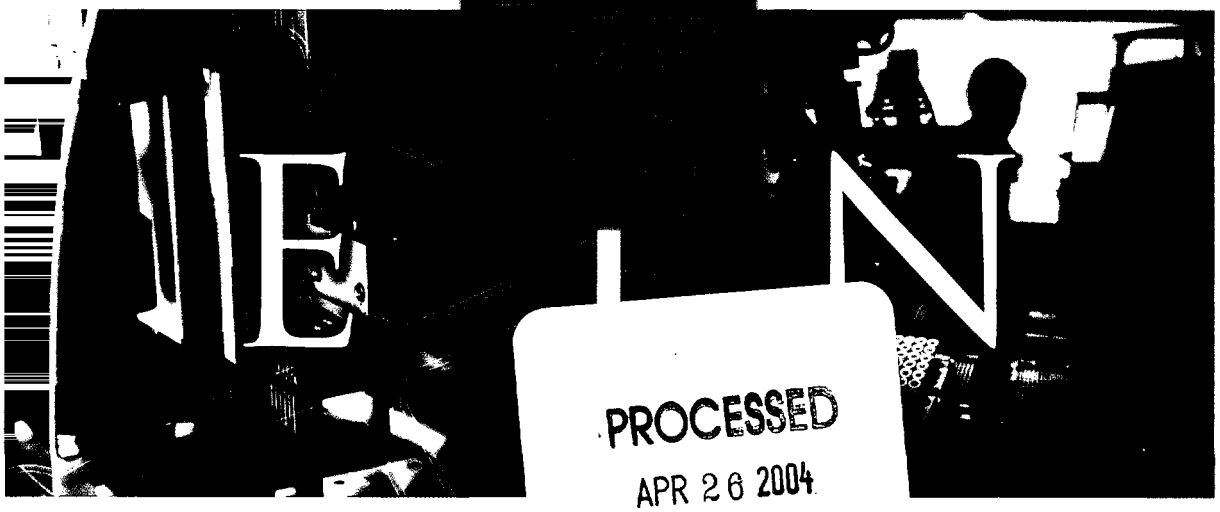
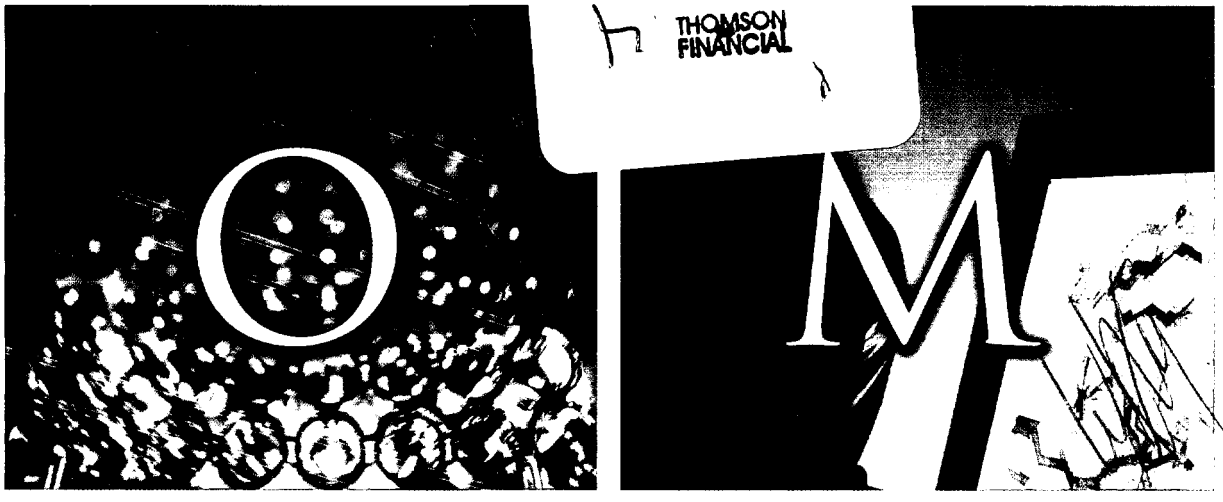


SEQUENOM®

Annual Report

2003





OVERVIEW

- *We are a genetics company organized into two distinct business units:* **SEQUENOM Genetic Systems** *and* **SEQUENOM Pharmaceuticals.** *We have created high performance DNA analysis technology and a platform that efficiently and precisely measures genetic variation. Both business units capitalize on this platform together with our detailed knowledge of specific genetic variations in humans.*

- **SEQUENOM Genetic Systems** *is dedicated to the sales and support of our platform, called the MassARRAY™ system, and to the continued expansion of DNA analysis applications for use with this system.*

- **SEQUENOM Pharmaceuticals** *has used MassARRAY technology and our extensive collections of DNA samples from diseased and healthy individuals to conduct large-scale human genetics studies to systematically identify disease-related genes that affect the health of significant portions of the population. The information from these studies is used for diagnostic and drug target identification followed by functional testing. Our ultimate goals are diagnostic and therapeutic product development and commercialization.*

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.

2003 ANNUAL REPORT

SEQUENOM, INC.

Harnessing the Power of Genetics

HIGHLIGHTS

SEQUENOM GENETIC SYSTEMS

- **Strong Consumables Revenue Growth.** Our MassARRAY consumables revenue exceeded $15 million for 2003, a 68 percent increase over the prior year.
- **Launched MassARRAY Compact System.** Our new benchtop system makes high precision DNA analysis technology affordable for a broader market.
- **Launched Gene Expression Analysis Application.** Our MassARRAY Quantitate Gene Expression application enables precise measurements of the activity of specific genes.
- **Developed Position in Clinical Research Market.** Our customers in the rapidly growing markets of clinical genetics and diagnostics include the Marshfield Clinic, the University of Michigan Medical Center and the University of Massachusetts Medical School.
- **Published Haplotyping Application.** Our Long-Range Haplotyping application can analyze combinations of genetic variation across a large sequence of DNA.
- **Expanded Intellectual Property Portfolio.** We obtained a core technology patent in Europe and acquired rights to a portfolio of DNA chemical cleavage patents.

SEQUENOM PHARMACEUTICALS

- **Completed 12 Human Genome Scans.** We identified candidate genes indicating association with common diseases such as breast cancer and type II diabetes.
- **Collaboration with Procter & Gamble Pharmaceuticals.** We licensed our proprietary osteoporosis genes to P&G Pharmaceuticals, who will conduct validation studies using complex biological and animal models.
- **Additional Pharmaceutical Agreements.** We entered into a genetics discovery collaboration with Bristol-Myers Squibb, as well as genetic service agreements with Eli Lilly, Pfizer and an undisclosed global pharmaceutical company.
- **Novel Genetic Risk Markers for Breast Cancer.** We identified five genetic markers indicating association with breast cancer.
- **Novel Candidate Genes for Diabetes.** We reported results from our discovery genetics program on type II diabetes, including extensive data on one of eight novel diabetes genes that we identified.
- **Forward Integration into Drug Discovery.** We initiated two high-throughput chemical screens for our genetic targets to identify small molecules for potential drug development, with a focus on cancer and metabolic disease.

"We believe that SEQUENOM*'s technology is the ideal platform to capitalize on the interplay between genetics and molecular healthcare, addressing medical problems that are genetic in nature and therefore should be understood at the molecular level."*

TO OUR SHAREHOLDERS

Since its inception, SEQUENOM *has made a significant commitment to the development of our MassARRAY product line for high performance genetic analysis. Internally, we have used this technology with great success to identify candidate genes that are associated with major human diseases with unmet clinical needs such as cancer, diabetes and others.*

This commitment now provides SEQUENOM *with a strategic position to capture the* **synergy between clinical genetics and molecular healthcare.**

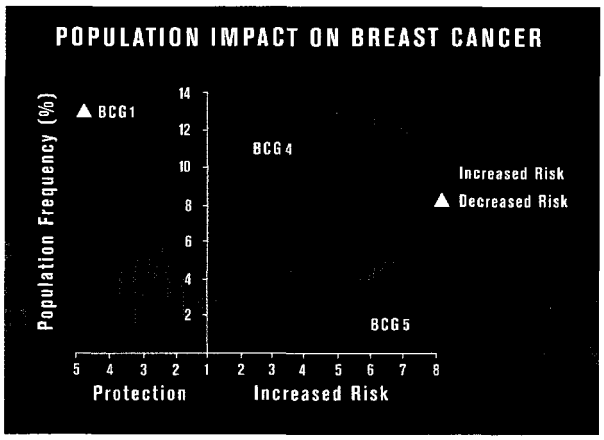
Genetics *is the study of inheritance. It is the goal of clinical genetics to identify genes and genetic variations that transfer the risk of developing a disease from parents to their children. Clinical genetics experienced a critical boost from the completion of the Human Genome Project. Genetic information enables scientists to select molecular targets with a causative role in disease development from the vast pool of biological and functional information on genes and proteins.*

SEQUENOM *is on the forefront of this endeavor. Our high performance MassARRAY DNA analysis technology efficiently and precisely measures genetic variation in large numbers of samples, assisting scientists in assigning clinical understanding and importance to specific genes and their genetic variations.*

Molecular healthcare *applies this understanding of disease on a molecular level in the clinical setting. Potential applications include recognizing individuals with a high risk to develop a certain disease prior to actual onset of the disease (therefore maximizing the chance for intervention); detecting early disease onset (for example, the discovery of pre-cancerous cells based on their molecular fingerprint long before conventional techniques would identify the presence of an actual tumor); and selecting the appropriate treatment based on the ability to recognize and understand the molecular individuality of a given disease in a given patient.*

Taking this a step further, SEQUENOM *applies MassARRAY technology internally to find causative factors for the development of complex human disease in an effort to ultimately discover drugs that target the root cause of disease, rather than treating disease symptoms. At this time, we are pursuing, internally and through partnerships, multiple discovery programs in type II diabetes, osteoporosis and cancer.*

BELOW SEQUENOM has identified genetic markers in five genes indicating association with breast cancer. Particular combinations are associated with a significant increase (BCG4 and BCG5) or decrease (BCG1) in a woman's risk for developing breast cancer.



SEQUENOM *is well positioned to capture the opportunity presented by the synergy of clinical genetics and molecular healthcare:*

1) *Our MassARRAY products provide high quality analysis of structural and quantitative changes in DNA, RNA and genes. In late 2003, we began marketing the MassARRAY Compact system, a smaller benchtop version of our flagship product. This version delivers comparable data quality at a lower cost, making precision DNA analysis affordable for a broader market.*

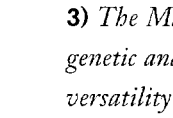
2) *We have completed 12 genetic scans of the human genome. In our discovery and replication populations, we have identified candidate genes that are associated with a variety of cancers, diabetes, obesity and other diseases. Our significant collection of proprietary disease genes offers the potential opportunity to develop innovative products and strategies for the diagnosis, therapy and prognosis of these major healthcare problems.*

3) *The MassARRAY system is a universal genetic analysis platform. Beyond the technology's versatility for a range of standard applications, we have established single molecule and single cell sensitivity that can, in combination with the specificity of mass spectrometry, recognize and quantify genetic variations that were previously unreliable to detect without expensive sample preparation and often risky sampling procedures such as amniocentesis. The MassARRAY system is also well suited to analyze proprietary genetic markers for the assessment of individual genetic risk to develop a certain disease. For example, we have identified a genetic marker panel that indicates breast cancer risk long before a tumor develops. By combining the enabling performance characteristics of our technology with this content, we offer new opportunities in the emerging field of molecular medicine.*

Our technology is capable of tracking a large variety of biomolecular markers in a patient. The Human Genome Project and the genomics revolution created an explosion of content that is available via the World Wide Web and other sources. The inherent flexibility of MassARRAY technology allows us and our customers to self-configure and validate tests easily and effectively, choosing which genes or biological markers to analyze for a particular disease. This flexibility comes without the need to compromise data quality. The MassARRAY system relies on a level of data quality that only mass spectrometry, an analytical reference tool, can deliver.

We believe that SEQUENOM*'s technology is the ideal platform to capitalize on the interplay between genetics and molecular healthcare, addressing medical problems that are genetic in nature and therefore should be understood at the molecular level. We are grateful to our shareholders, partners and customers for their support, and we look forward to reporting our continued progress in this exciting new field of medicine.*

Sincerely,



Toni Schuh, Ph.D.

President & Chief Executive Officer,
SEQUENOM, *Inc.*

"SEQUENOM's MassARRAY system has the potential not only to provide precise quantitative measurements of gene expression levels, but also to allow assessment of allele-specific patterns of expression. This has a wide range of possible applications ranging from studies of imprinting during development to loss of heterozygosity in cancer."

– John Quackenbush, Ph.D., The Institute for Genomic Research (TIGR)

SEQUENOM GENETIC SYSTEMS

SEQUENOM Genetic Systems provides genetic solutions to our customers through the sales and support of our MassARRAY system. This system is widely accepted as a leading high performance DNA analysis platform, providing a level of performance in the field of discovery genetics that surpasses conventional approaches in many areas.

Genes are the smallest units of heredity. They contain DNA, the molecule that encodes inherited information, and they regulate the production and function of proteins and other biological materials in our cells. DNA sequence variations, or SNPs, in genes can cause or contribute to major human disorders; identifying these variations may be useful for the diagnosis, monitoring, treatment and prevention of disease.

Our Distinguished Customers

We have been promoting and selling MassARRAY products since 1999 and have sold more than 100 MassARRAY systems to prominent customers throughout the world. Our customers include major pharmaceutical companies such as Pfizer, GlaxoSmithKline and Serono; global technology leaders such as Hitachi and Samsung; premier academic research centers such as the Whitehead Institute and the Sanger Institute; and notable government laboratories including the National Institutes of Health and the United States Department of Agriculture.

BELOW Scientists at the Genetic Research Center (GRC) in Munich are using SEQUENOM's MassARRAY technology to find genetic links to common diseases. The GRC is a joint institute formed by GlaxoSmithKline and the Max Planck Society.

High Performance DNA Analysis

Our MassARRAY system combines four basic components: **1)** proprietary analytical reaction technology, sample preparation and dispensing hardware to prepare DNA for analysis, **2)** a coated silicon chip known as the SpectroCHIP® bioarray, **3)** a MALDI-TOF mass spectrometer, utilizing an established analytical method that we have adapted for precision DNA analysis and **4)** bioinformatics databases and software. Each of these components contributes to a high level of performance in terms of speed, accuracy and efficiency.

One Platform, Multiple Applications

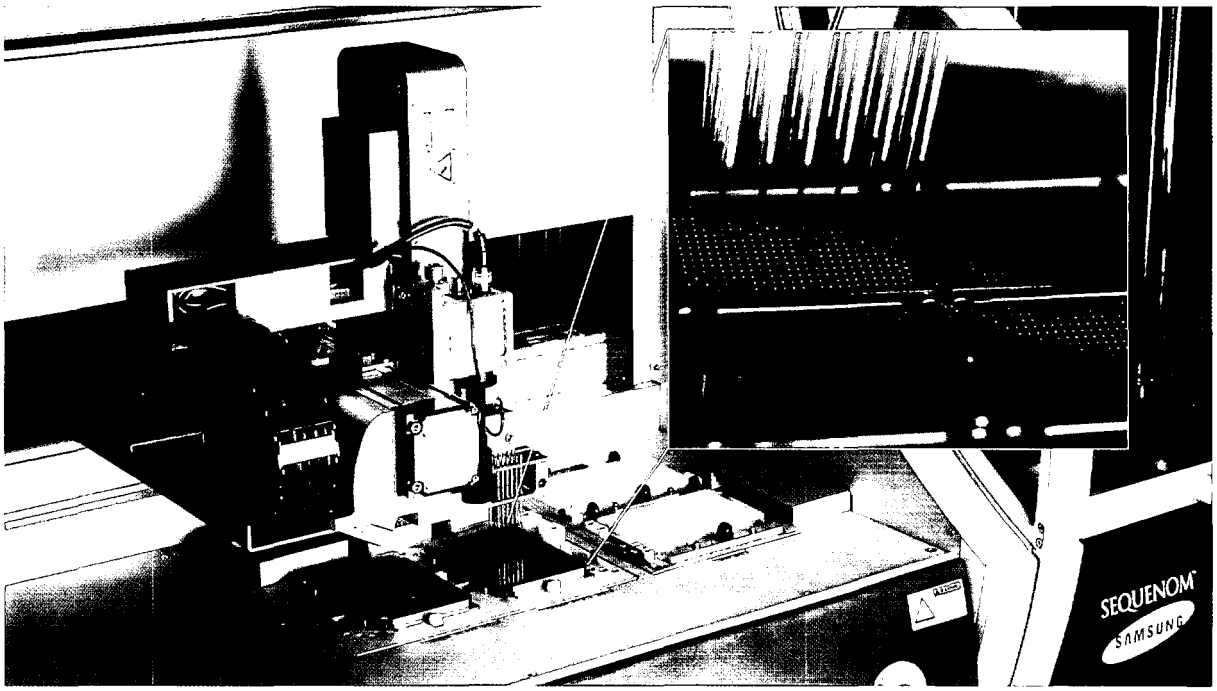
We offer one platform for a wide variety of DNA analysis applications. The power and flexibility of our MassARRAY system resides in its ability to rapidly distinguish genetic variations with a high level of precision and sensitivity. These core strengths have helped us to successfully penetrate the **High Performance Genotyping** market, where we are well established as a leader for data quality, while spawning a number of additional applications.

Our **Multiplexed Genotyping** application allows customers to analyze up to 15 SNPs in an individual reaction, significantly increasing the capacity and throughput of large-scale genetic research. Our **Automated Assay Design** software supports the automated design of multiplexed SNP assays without the need for costly and time-consuming optimization or validation.

Our **Long-Range Haplotyping** application enables direct resolution of specific combinations of SNPs across a much larger sequence of DNA compared to existing technologies. Our **Oligonucleotide Quality Control** application ensures error-free production of oligonucleotides, short strands of synthetic DNA used in a number of genomic research programs.

We believe the outstanding specificity and accuracy of our MassARRAY technology combined with our **Quantitative Gene Analysis** capability will provide the critical link between functional genomics and clinical genetics. Our **Allele Frequency Analysis** application allows customers to determine the frequency of a SNP in a population by quantitatively pooling hundreds of DNA samples into a single assay.

BELOW The MassARRAY Nanodispenser is one component of SEQUENOM's MassARRAY system for high performance DNA analysis. This compact liquid transfer system dispenses up to 384 individual samples onto a single SpectroCHIP bioarray in less than 12 minutes.



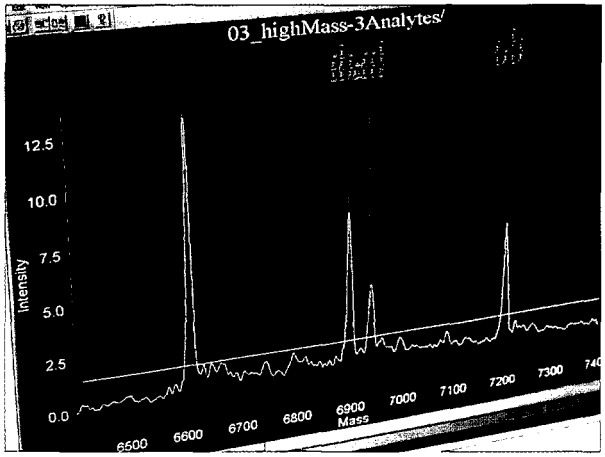
The **MassARRAY Quantitate Gene Expression** application generates reproducible and accurate measurements of the expression of specific genes. This important application will assist researchers that are interested in developing robust diagnostics and associating specific gene activity with disease state or drug treatment.

Comparative Sequencing is an effective method for rapidly comparing a target DNA sequence with a reference sequence to identify differences. Our **Targeted SNP Discovery** application enables customers to rapidly detect and locate previously unknown SNPs. Other potential applications for Comparative Sequencing include bacterial and viral typing, mutation analysis, species identification and DNA methylation detection, an important application for cancer research and diagnostics.

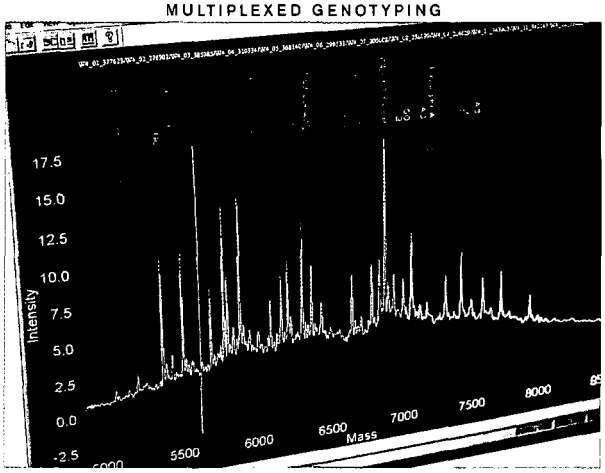
Expanding Our Market

In late 2003, we began marketing our MassARRAY Compact system, which offers

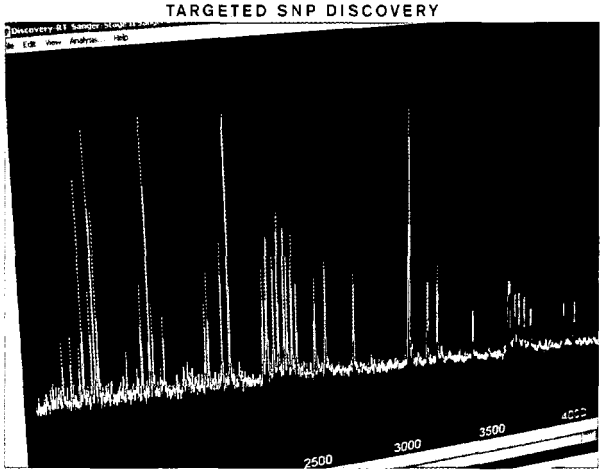
HIGH-PERFORMANCE GENOTYPING



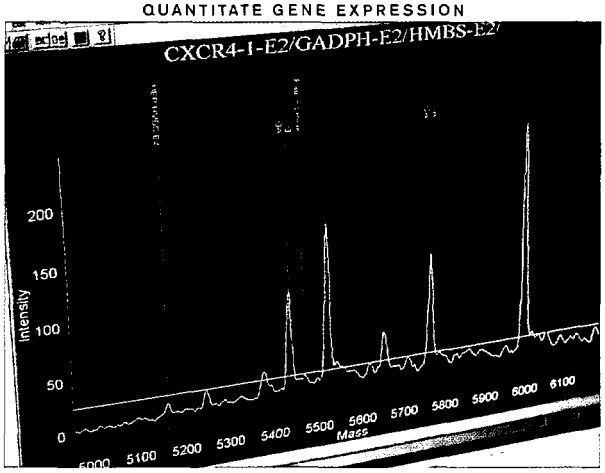
MULTIPLEXED GENOTYPING



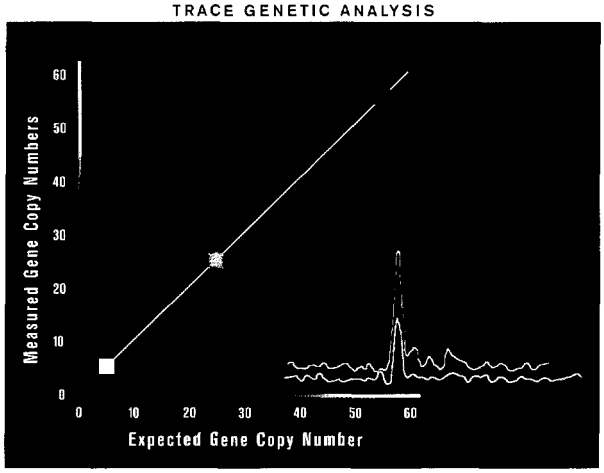
TARGETED SNP DISCOVERY



QUANTITATE GENE EXPRESSION



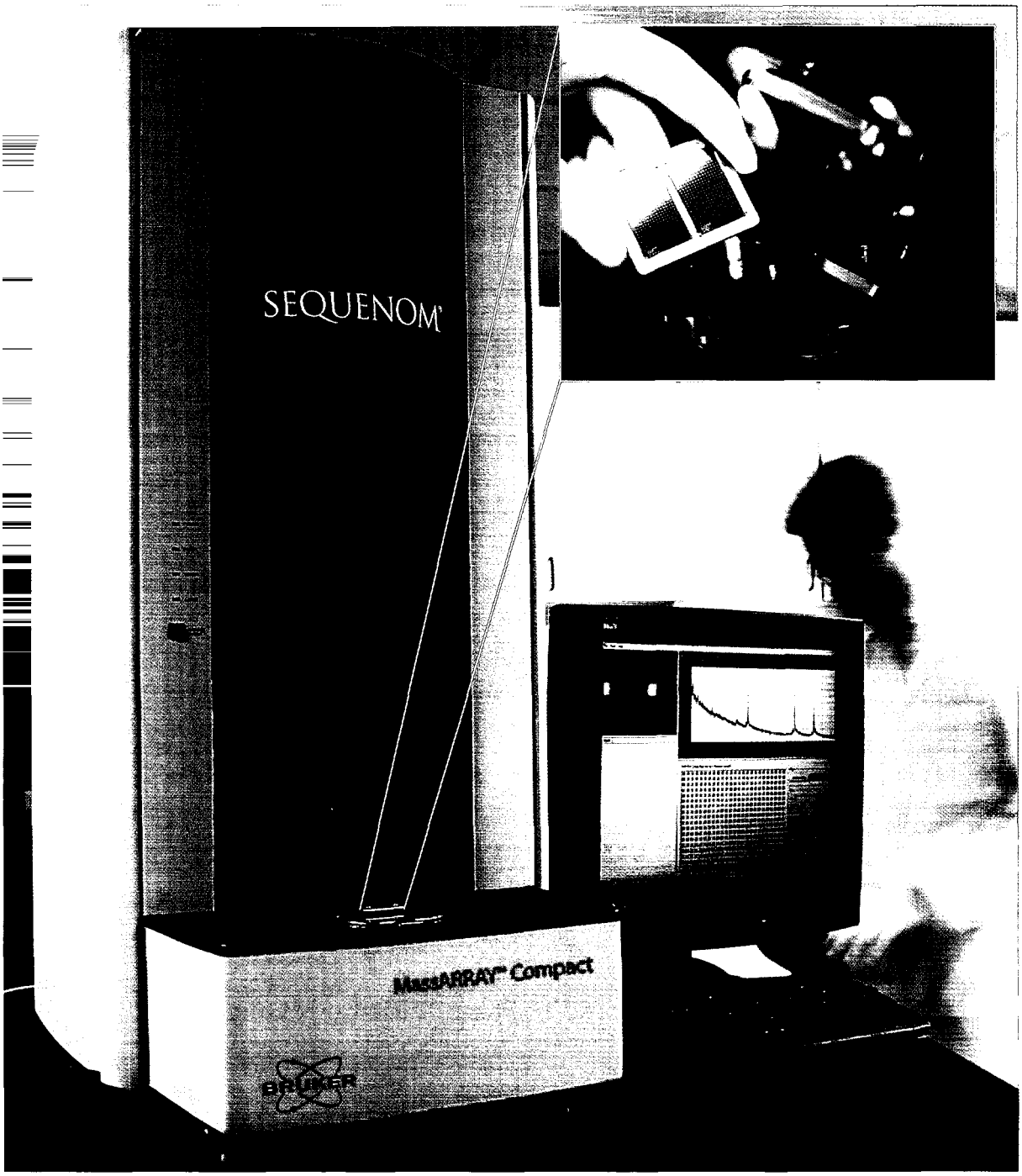
TRACE GENETIC ANALYSIS



THIS PAGE The precision and flexibility of SEQUENOM's MassARRAY system enable a wide variety of applications to accelerate and improve virtually every type of high performance DNA analysis. The sensitivity of the technology has also demonstrated the capability for single cell or trace genetic analysis. Potential applications for single cell analysis include areas such as prenatal diagnostics, oncology and infectious disease.

OPPOSITE The MassARRAY Compact system supports all of SEQUENOM's applications with the same high degree of quality uniquely provided by mass spectrometry. This new benchtop system can analyze up to 3,840 individual samples per day and sells for less than $300,000, or about half the cost of our standard high throughput system.

approximately half the throughput capacity of our standard high throughput system for about half the cost. The MassARRAY Compact system supports all of our applications with the same high degree of quality uniquely provided by mass spectrometry. The reduced space requirements and lower cost of this benchtop system make reference-level DNA analysis technology affordable for a much broader market. We established MassARRAY Compact system reference sites at The Institute of Genomic Research (TIGR) and the University of Manchester, U.K. Our MassARRAY Compact system in combination with our MassARRAY Quantitate Gene Expression application address larger segments of the clinical genetics and diagnostics markets. Our customers in these rapidly growing segments already include the Marshfield Clinic, the University of Michigan Medical Center and the University of Massachusetts Medical School.



"We believe that SEQUENOM*'s novel methodologies have produced a very promising series of osteoporosis targets, which linked with our expertise in bone biology and clinical development, has the potential to lead to a new series of breakthrough therapeutics for the treatment of osteoporosis."* – Douglas W. Axelrod, M.D., Ph.D., Procter & Gamble Pharmaceuticals

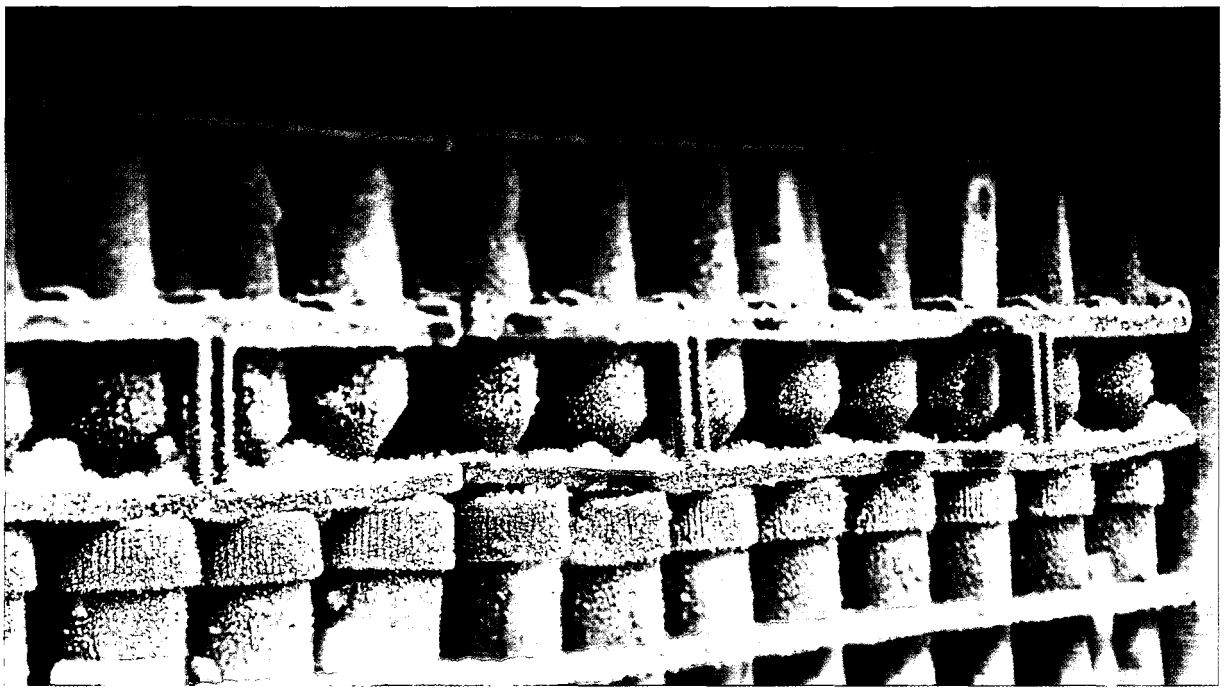
SEQUENOM PHARMACEUTICALS

SEQUENOM Pharmaceuticals applies human genetics to systematically identify disease-related genes that affect significant portions of the population. Using our MassARRAY technology, our DNA sample collections of diseased and healthy individuals and tens of thousands of genetic markers, we have completed 12 high-resolution genetic scans of the human genome.

This discovery genetics approach allows us to determine statistically significant associations between genetic markers and common diseases, which we then replicate in independent populations and validate in multiple human cell types using biological screening technologies. The information obtained can be used for functional studies, clinical diagnostics and potential drug target discovery.

We have identified more than 60 high-confidence or replicated genetic targets associated with breast, lung, prostate and skin cancers, central nervous system disorders, metabolic and cardiovascular diseases, and musculoskeletal and inflammatory conditions such as osteoarthritis and osteoporosis. We have begun internal drug discovery programs for a small number of these targets. Our ultimate goals are diagnostic and therapeutic product development and commercialization.

BELOW SEQUENOM's extensive collection of DNA samples from diseased and healthy individuals is the raw material that the Company uses to conduct genome-wide scans. A typical genome scan uses 28,000 to 100,000 genetic markers. The scale of this endeavor enables SEQUENOM to search for novel disease associations, focusing on common, yet complex diseases such as cancer and cardiovascular disease.



Discovery Genetics Strategy

Our discovery genetics approach involves selecting SNP markers from genes across the genome. Our genome scans typically use more than 28,000 SNP markers.The DNA of two populations of individuals (for example, individuals with diabetes versus those without) are then compared, or scanned, at each marker to identify potential association of the marker and nearby genes with predisposition for the disease.

Our strategy focuses on rapidly identifying a smaller and more manageable set of potential disease-related SNPs. This subset of SNPs is then tested and scrutinized by way of repetitive tests in the original population. Subsequently, potential disease-related SNP markers are tested again in independent disease collections. Markers shown to have a wider potential disease association are further studied to attempt to determine which gene contains the causative changes and with a view to exploring the biological and genetic mechanisms underlying the disease.

Discovery Genetics Tools

Using our MassARRAY technology, we have a large internal capacity for high throughput genotyping and a variety of other genetics discovery applications. In addition to our internal programs, we use these resources to provide DNA analysis as a part of our strategic collaborations.

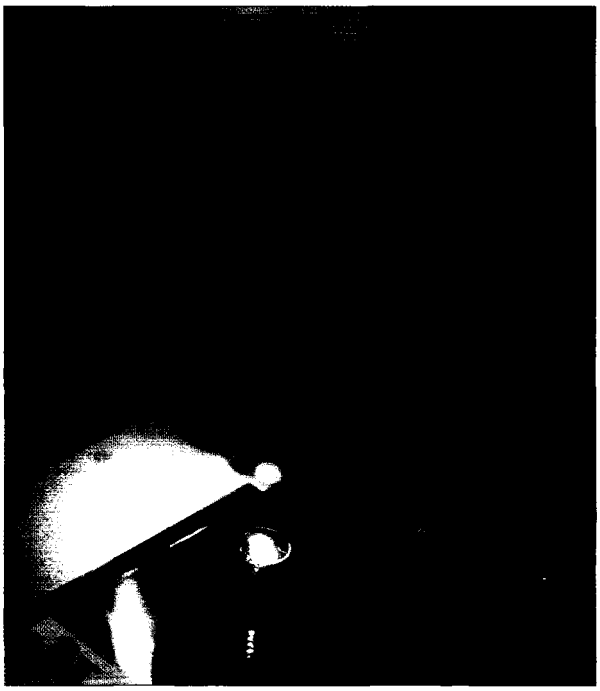
Our collection of SNP assays contains more than 400,000 validated SNP assays extracted from a database of approximately 5.4 million designed SNP assays. Our 28,000 genome-wide marker set is a carefully selected extraction of markers with a bias toward gene-rich regions of the human genome. We also have 50,000 and 100,000 marker sets for denser coverage of the genome.

Our DNA collections of diseased and control individuals are the raw material that we use with our SNP markers to scan the genome. 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.

Capitalizing on Our Discovery Assets

Based upon the large number of candidate disease genes and related targets we have

BELOW Most tissue types in the human body are represented in SEQUENOM's extensive collection of human cell tissue. The Company uses these cells to add functional information to its genetic findings. Functional models may be extended into functional assay development in preparation for chemical screening.



identified, we are pursuing partnering opportunities with large pharmaceutical, biotechnology and diagnostic companies that have the appropriate expertise and resources for development of therapeutic and diagnostic product candidates. This strategy is best exemplified by our collaboration with Procter & Gamble Pharmaceuticals.

In December 2003, we licensed exclusive rights to our proprietary osteoporosis candidate genes to P&G Pharmaceuticals, who will conduct biological validation studies on these candidate genes using complex biological and animal models, and potentially develop therapeutic products. In addition to royalties on therapeutic product sales, we are entitled

BELOW SEQUENOM uses high-throughput chemical screening on selected targets in the Company's areas of focus. Chemical hits are then analyzed for potential advancement into the process of drug discovery and development. Current programs are focused in the areas of cancer and metabolic disease.

to receive license and milestone payments that could potentially reach $30 million based on the successful clinical development and launch of new drugs for multiple targets. We retain diagnostic rights to the osteoporosis candidate genes and related targets.

P&G Pharmaceuticals is one of only a small number of R&D organizations throughout the world capable of performing the complex biological and animal models necessary for preclinical development in osteoporosis. P&G Pharmaceuticals is a recognized leader in the $4 billion osteoporosis therapeutics market, with more than $700 million in sales in 2003 for their leading drug Actonel®. Actonel was discovered and developed at P&G Pharmaceuticals and is currently co-marketed worldwide with Aventis.

In addition, we entered into a genetics discovery collaboration with Bristol-Myers Squibb, as well as genetic service agreements with Eli Lilly and Pfizer. We also intend to pursue partnering opportunities with respect to appropriate anti-body targets to facilitate potential therapeutic product development while maintaining internal focus on small molecule discovery programs.

Forward Integration of Our Targets

We have begun internal drug discovery programs for a small number of our candidate genes. In 2003, we initiated two high-throughput chemical screens to identify molecules for potential drug development. Our current programs are focused on genes in the areas of cancer and type II diabetes, which are at various stages of target validation and chemical screening.

We have also identified targets appropriate for potential monoclonal antibody therapeutics for which we have performed a variety of *in vitro* and other tests. Monoclonal antibody therapeutics are genetically engineered proteins that can be used for the treatment of cancer. We are further analyzing tissue staining and distribution for several of these targets prior to determining which to advance into monoclonal antibody development.

BELOW Molecules initially identified in SEQUENOM's high-throughput chemical screens are followed up, modified and retested in an iterative process known as medicinal chemistry.

BELOW SEQUENOM uses all of its accumulated genetic and functional information together with structural information on a target to initiate the process of turning a chemical hit into a drug development candidate.

"With the introduction of our MassARRAY Compact system and developed applications for Quantitative Gene Analysis, Comparative Sequencing and High Performance Genotyping, we expect increased product and consumables sales in 2004."

OUR FINANCIAL POSITION

Our total revenues for 2003 were $30.3 million, down slightly from $30.9 million in 2002. This included $28.2 million in MassARRAY product revenues for the year, up 14 percent from $24.8 million for 2002.

Our total costs and expenses for the year decreased to $69.3 million, compared to $123.3 million for the prior year. The net loss for fiscal year 2003 decreased dramatically to $36.7 million, or $0.93 per share, compared to $205.7 million, or $5.39 per share for fiscal year 2002. As of December 31, 2003, we held cash, cash equivalents, short-term investments and restricted cash totaling $67.5 million.

With the introduction of our MassARRAY Compact system and developed applications for Quantitative Gene Analysis, Comparative Sequencing and High Performance Genotyping, we expect increased product and consumables sales in 2004.

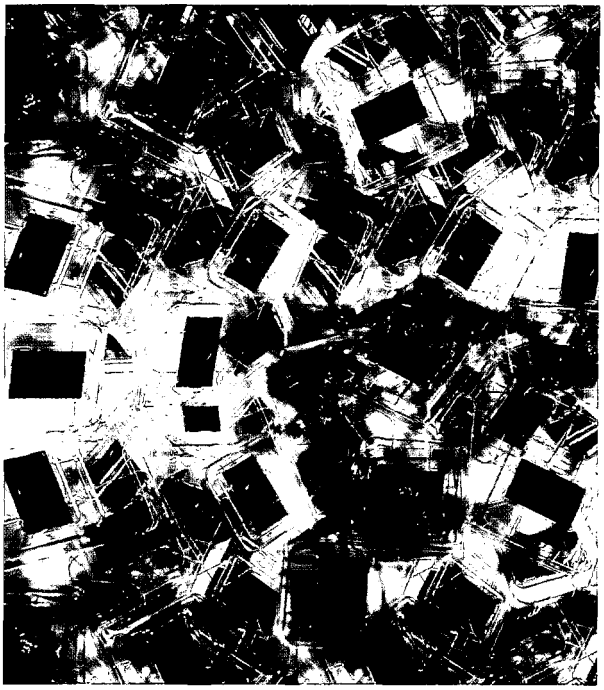
In the Pharmaceuticals business unit, we have completed our initial gene discovery goals and continue related partnering and licensing activities. We will continue to target major pharmaceutical, biotechnology and diagnostics companies for partnering opportunities in 2004.

We continue to develop diagnostic test panels for breast cancer and other diseases. We plan to pursue out-licensing opportunities for our diagnostics intellectual property under royalty bearing agreements with diagnostic companies with the goal of expediting home-brew and *in vitro* diagnostic test development and commercialization.

Our Fiscal Responsibility

Our management and Board of Directors assume our fiscal responsibility and corporate governance obligations with great care. Our policies and procedures include a system of internal accounting controls and an Audit Committee that reviews the Company's financial reporting process on behalf of the Board of Directors. The Audit Committee and the Board of Directors have reviewed and approved the audited financial statements that appear on the pages that follow.

BELOW MassARRAY consumables, including SEQUENOM's proprietary SpectroCHIP bioarray, generate an ongoing revenue stream for the Company. Consumable sales exceeded $15 million in 2003, a 68 percent increase over the prior year.



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

FORM 10-K

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, 2003

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 or incorporation or organization)	(I.R.S. Employer Identification No.)
3595 John Hopkins Court San Diego, California (Address of principal executive offices)	92121 (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, 2003 as reported on the Nasdaq National Market, was approximately $104.9 million. Shares of Common Stock held by each executive officer and director and by each person who owns 10% or more of the outstanding Common Stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 27, 2004, there were 40,048,021 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 May 14, 2004.

SEQUENOM, INC.

FORM 10-K

For the Fiscal Year Ended December 31, 2003

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PART I

Item 1. BUSINESS

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

SEQUENOM®, SpectroCHIP®, and MassARRAY™ are 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 organized into two distinct business units: SEQUENOM Genetic Systems and SEQUENOM Pharmaceuticals. We have created high performance DNA analysis technology and a platform that efficiently and precisely measures genetic variation. Both business units capitalize on this platform together with our detailed knowledge of specific genetic variations in humans. SEQUENOM Genetic Systems is dedicated to the sales and support of our platform, called the MassARRAY system, and to the continued expansion of DNA analysis applications for use with our MassARRAY system. SEQUENOM Pharmaceuticals uses MassARRAY technology and our extensive collections of DNA samples from diseased and healthy individuals to conduct large-scale human genetics studies to systematically identify disease-related genes that affect the health of significant portions of the population. The information from these studies is used for diagnostic and drug target identification followed by functional testing. Our ultimate goals are diagnostic and therapeutic product development and commercialization.

MassARRAY product related revenues represented approximately $28.3 million, $24.8 million, and $21.5 million or 94%, 80%, and 70% of our revenues during the years ended December 31, 2003, 2002 and 2001, respectively, while approximately $1.6 million, $5.6 million, and $8.9 million or 5%, 18%, and 29% of our revenues during the years ended December 31, 2003, 2002, and 2001, were derived from genetic validation services. Incyte Pharmaceuticals, a research, collaboration and services partner of ours, represented $0.0, $5.0, and $4.1 million or 0%, 16% and 13% of our revenues during the years ended December 31, 2003, 2002 and 2001, respectively. These 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 short-term, if at all.

Our business is subject to numerous risks that are highlighted in the section entitled "Risks and Uncertainties Related to Our Business" immediately following our executive officer summaries below.

We are a relatively new company and, for the most part, our technologies and candidate disease genes, particularly in the SEQUENOM Pharmaceuticals business unit, are still in the early stages of development. We face challenges and obstacles that we must overcome to accomplish our business goals and strategies, including generating demand for our products and services, our limited production capability, our need for additional capital, our dependence on MassARRAY and consumables sales and our reliance on third-parties. We have experienced significant operating losses in each period since our inception and expect to continue to incur operating losses for the foreseeable future. At December 31, 2003, our accumulated deficit was approximately $381.4 million. These losses have resulted principally from costs incurred in research and development, from selling, general and administrative costs associated with our operations and the write-down to the carrying value of acquired goodwill and intangibles. In addition, our stock price has been volatile and we expect it to continue to be volatile in the future.

Financial information related to each of our business units is presented in Note 3 to the Consolidated Financial Statements. A summary of domestic and foreign revenue from the sale of products and services is detailed in Item 7, Management's Discussion and Analysis, and in Note 12 to the Consolidated Financial Statements.

SEQUENOM Genetic Systems

SEQUENOM Genetic Systems derives revenue primarily from sales of our MassARRAY hardware, software and consumable products. The MassARRAY system includes a liquid handling device for sample preparation, a dispensing unit for sample transfer onto chips, an analytical instrument adapted for DNA analysis known as a mass spectrometer, and biological databases known as bioinformatics that incorporate proprietary software. The consumables include our specially designed array chip. We have been promoting and selling MassARRAY products since 1999.

We have sold over 100 systems worldwide, and MassARRAY technology is accepted as a leading high-performance DNA analysis system. Our list of customers includes pharmaceutical companies such as Pfizer and GlaxoSmithKline, academic research centers such as the Whitehead Institute and The Sanger Institute, and government laboratories such as the National Institutes of Health and the U.S. Department of Agriculture. Sales to these customers were $2.6 million in the year ended December 31, 2003. 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 and Korea.

Highlights for our Genetic Systems business unit in 2003 included:

- *MassARRAY Compact System Launch.* Our smaller and lower-throughput benchtop system, which we refer to as our MassARRAY Compact system, makes precision DNA analysis technology affordable for a broader market than our standard MassARRAY system. We established MassARRAY Compact system reference sites at The Institute for Genomic Research, or TIGR, and the University of Manchester, U.K.

- *Gene Expression Analysis Application Launch.* We launched the MassARRAY Quantitate Gene Expression application, which measures the amount of genes or gene copies in a sample. This new application is available as a software and bioinformatics package that can be purchased as a product module for the MassARRAY system. We entered into agreements with TIGR and the University of Michigan for this application.

- *Strong Consumables Revenue Growth.* Our consumables-based revenue for fiscal year 2003 exceeded $15 million, a 68 percent increase over 2002.

- *Expanded Intellectual Property Portfolio.* We strengthened our proprietary position for our MassARRAY products and their use by obtaining a core DNA analysis by mass spectrometry patent in Europe. This patent claims various DNA analysis by mass spectrometry methods that are performed using our MassARRAY system. This patent applies in most countries in Europe and expires in 2015. We also acquired rights to a portfolio of DNA chemical cleavage patents and pending patent applications.

- *Increased System Throughput and Capacity.* We launched a new method for increasing the multiplex levels for our High-Performance Genotyping application. Genotyping is the analysis of single nucleotide polymorphisms, or SNPs. SNPs are the most common form of genetic variation and represent the origin of most differences between individuals, including predisposition to disease and variations in drug efficacy and response. Multiplexing allows customers to analyze up to 15 SNPs or to simultaneously measure the quantity of a particular SNP in 500 DNA samples in a single experiment.

- *Developed Long-Range Haplotyping Application.* Our method for Long-Range Haplotyping was published in the *Proceedings of the National Academy of Sciences.* Haplotypes are groups of SNPs that are inherited together. This application can analyze a range of up to 24,000 DNA bases and addresses market demand for reliable haplotyping technology.

Products & Applications

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.

In late 2003 we began marketing a smaller and lower-throughput 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 has an upfront capital cost of approximately one half of that of the higher throughput version. 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. 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, addressing 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.

- *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.

- *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.

- *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.

- *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.

  - *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.

  - *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.

  - *Potential Applications.* Potential future applications that we may develop include strain-specific measurement of the quantity of a virus in blood, vaccine quality control, measurement of fetal chromosomal abnormalities, and detection of DNA aberrations in cancer samples.

- *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 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.

- *Potential Applications.* Potential future applications that we may develop include bacterial and viral typing; DNA methylation detection, an important application for cancer research and diagnostics; mutation analysis; and species identification.

Our open system approach allows users to adapt our core applications for alternative methods. For example, researchers at the University of Oxford and Harvard University developed a new application for Quantitative Gene Analysis, which was published in *Nature Genetics*.

Sales and Marketing

SEQUENOM Genetic Systems' market segments 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 France, India, Israel, Japan and Korea. The sales cycles for our products and services 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

Our new 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. In addition, we believe that our recently introduced MassARRAY Compact system, together with the expanded application base, has increased the addressable market for our MassARRAY products to larger segments of the laboratory and clinical research 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.

SEQUENOM Pharmaceuticals

SEQUENOM Pharmaceuticals applies human genetics to systematically identify disease-associated genes that affect the health of significant portions of the population. We identify 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," is done using a large number of genetic markers that span the human genome. We then determine statistically significant associations between genetic markers and disease and replicate our findings in independent populations differing in parameters such as race, gender and age. We then validate these associations in multiple human cell types using a set of biological screening technologies.

Significant highlights for our Pharmaceuticals business unit in 2003 included:

- *Completed 12 Scans of the Human Genome.* 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 based upon our ability to replicate our disease association findings in independent populations or based upon other scientific support.

- *Forward Integration into Drug Discovery.* We have begun internal drug discovery programs for a small number of these selected candidate genes and related targets. In 2003, we initiated two high-throughput chemical screens to identify molecules for potential drug development. We have also identified targets appropriate for potential monoclonal antibody therapeutics for which we have performed a variety of *in vitro* and other tests. Monoclonal antibody therapeutics are genetically engineered proteins that can locate and bind to cancer cells. For several of these we are further analyzing tissue staining and distribution prior to deciding on which targets to advance into monoclonal antibody development. Our gene discovery programs are still in a relatively early stage of development, however, and they may not result in revenue-generating products.

- *Osteoporosis Collaboration with Procter & Gamble Pharmaceuticals.* We licensed exclusive rights to our proprietary osteoporosis candidate genes to P&G Pharmaceuticals, who will conduct biological validation studies on these candidate genes using biological and animal models.

- *Additional Agreements with Global Pharmaceutical Companies.* We entered into a genetics discovery collaboration with Bristol-Myers Squibb under which SNPs identified by Bristol-Myers Squibb are analyzed in some of our DNA samples. We retain diagnostic rights with respect to the discoveries made and we are entitled to receive future milestone and royalty payments that are conditional upon successful product development and sales by Bristol-Myers Squibb with respect to therapeutic products, if any, that result from the collaboration. We also entered into genetic service agreements with Eli Lilly, Pfizer and an additional undisclosed global pharmaceutical company. Under these agreements we are paid a fee for performing certain services and will not receive any additional revenue after these services are performed. We do not retain any intellectual property rights under these genetic service agreements.

- *Novel Genetic Risk Markers for Breast Cancer.* We identified five genetic markers for genes that appear to affect the probability that a woman will develop breast cancer in multiple research populations.

- *Novel Candidate Genes for Diabetes.* We reported the results from our discovery genetics program in type II diabetes, including extensive data on *FOXA2*, one of eight novel diabetes genes that we identified in our study.

Disease Gene Discovery Strategy

Our discovery genetics approach involves selecting SNP markers primarily in genes throughout the genome. Our genome scans typically use more than 28,000 SNP markers. The DNA of two populations of individuals (for example, individuals with diabetes versus those without) are then compared, or scanned, at each marker to identify potential association of the marker and nearby genes with predisposition for the disease. We believe that this approach identifies genes associated with diseases that affect large percentages of the general population.

Our strategy focuses on rapidly identifying a smaller and more manageable set of potential disease-related SNPs. This small subset of SNPs are then tested and scrutinized by way of repetitive tests in the original population. Subsequently, potential disease-related SNP markers are tested again in independent disease

collections. Markers shown to have a potential disease association are further studied to attempt to determine which gene contains the causative changes and with a view to exploring the biological and genetic mechanisms underlying the disease.

Using our MassARRAY technology, we are capable of pooled DNA allele frequency analysis and high throughput genotyping at relatively low cost. We have a large internal capacity for high throughput genotyping and a variety of other genetics discovery applications. In addition to our internal programs, we use these resources to provide DNA analysis as a part of our strategic collaborations.

Other discovery genetics tools used by our Pharmaceuticals business unit include:

- *SNP Assays.* 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.

- *DNA Collections.* 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

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.

Under the agreement, we retain diagnostic rights to the osteoporosis candidate genes and related targets, and provided that P&G Pharmaceuticals exercises its exclusive option rights, it will have the exclusive right to commercialize the results generated under the collaboration for therapeutic applications. In the event that future therapeutic products result from the collaboration and are approved for sale by the Food and Drug Administration or similar foreign regulatory authorities, we are entitled to royalties on product sales. In addition, we may receive license and milestone payments at various times during the development process that could potentially reach $30 million, in the event that all milestones are achieved for multiple therapeutic products. These license and milestone payments are contingent upon P&G Pharmaceuticals exercising its option for exclusive commercialization rights and upon the successful clinical development and regulatory approval through several phases of the regulatory approval process, for multiple drug products. As of December 31, 2003, we have not received any license or milestone payments under the agreement, and because such payments are dependent upon successful completion of the developmental milestones under the agreement, it is possible that we may never receive any payments under this agreement. The agreement provides for an 18 month option period and a research term that is extendable upon the mutual agreement of the parties.

Business Strategy

For the majority of our candidate disease genes and related targets, our strategy includes pursuing partnering opportunities with larger pharmaceutical and biotechnology companies with the expertise and resources to potentially advance our candidate disease genes and related targets towards drug

or diagnostic development. We may also pursue joint development or other partnering strategies with other biotechnology companies and smaller pharmaceutical companies or other companies interested or involved in the development of drugs or diagnostic products. We also intend to pursue partnering opportunities with respect to appropriate antibody targets to facilitate potential therapeutic product development while maintaining internal focus on small molecule discovery programs. However, to date we have entered into a limited number of collaborations and we may not be able to establish an adequate number of additional collaborations. In addition, even if we successfully establish new collaborations, there are no assurances that we or our collaborations partners will ultimately be successful in developing, commercializing or obtaining regulatory approval of therapeutic, diagnostic or other products.

We intend to pursue some drug discovery programs internally with a focus on our genes and related targets in the area of cancer and type II diabetes. We have commenced these discovery programs on a small number of selected candidate genes which are at various stages of target validation and chemical screening.

Our genetic markers also present potential opportunities for new molecular diagnostic tests. We have identified genetic variants in five genes that appear to affect the probability that a woman will develop breast cancer. We continue to develop diagnostic test panels for this and other diseases. We plan to pursue out-licensing opportunities for our diagnostics intellectual property under royalty bearing agreements with diagnostic companies with the goal of expediting home-brew and *in vitro* diagnostic test development and commercialization. We may not be able to successfully develop and commercialize or out-license any candidate genes and related targets that we may discover or develop.

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 66 issued patents and more than 113 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 pertain to our Genetic Systems business unit and 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 inventions pertaining to the Pharmaceuticals business unit's 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 therapeutic related applications 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.

Although we are not currently a party to any material intellectual property related legal proceedings, 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.

Many of these companies utilize a parallel analysis approach. In such an approach, a large number of SNPs are identified and then simultaneously analyzed. While this method can yield significant time and cost savings in some situations, it can also be limiting for many researchers. In addition, these short-term savings can result in higher long-term costs, as some experiments may need to be repeated in smaller, more defined subsets where the additional data points are irrelevant.

Affymetrix's technology is an example of this parallel approach. Utilizing Affymetrix's technology, a customer can simultaneously analyze thousands of SNPs in a single experiment. However, each SNP is pre-selected and manufactured by Affymetrix. If a user wants to analyze those pre-selected SNPs, this can be a cost-effective method for doing so. However, this limitation may restrict researchers whose area of focus is not incorporated within the scope of Affymetrix's predefined SNPs or who are only interested in one or a few of the thousands of pre-defined SNPs. This is especially true for researchers who have already narrowed their area of focus to a small, select group of SNPs and want to pay for and analyze only this specific subset. Illumina's and Applied Biosystems' instruments also use this parallel analysis approach. Although particular products of these companies can allow customers to customize and select their own SNPs, the cost savings are typically realized by those customers with larger batches of large numbers of SNPs.

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 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.

Our Pharmaceuticals business unit uses our MassARRAY technology and our collections of DNA samples from diseased and healthy individuals to identify disease-related genes in humans. However, our genetics-based programs are still in relatively early stages of development and we may not have the resources required to successfully compete in this area. Many of the competitors of our Pharmaceuticals business unit have much greater financial, technical, research, marketing, sales, distribution, service and other resources than we do. As a result, these competitors may be able to develop diagnostic or therapeutic products more quickly and efficiently than we can. In addition, some of our customers use our MassARRAY technology to perform genetics studies on their own disease populations to develop therapeutic and diagnostic products. In such cases, we may potentially compete against our customers.

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, diagnostic development and pharmaceutical target identification and development. Our research and development expenses for the years ended December 31, 2003, 2002, and 2001, were $25.4 million, $33.5 million, and $29.3 million, respectively.

During 2003 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 of our MassARRAY technology, developing new technologies, expanding our candidate gene portfolio, and target identification, validation, and development for diagnostic and therapeutic applications.

Government Regulation

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.

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. The receipt and timing of regulatory approvals for the marketing of such products may have a significant effect on our future revenues. Diagnostic or therapeutic products developed by us or our collaborators will require regulatory approval by governmental agencies prior to commercialization. Human pharmaceutical products are subject to rigorous testing and other approval procedures by the Food and Drug Administration 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 such pharmaceutical products.

As an initial step in the pharmaceutical product approval process an applicant typically conducts preclinical laboratory and animal studies of the product candidate. Following these studies, the applicant will submit an Investigational New Drug, or IND, application to the FDA. Once the IND becomes effective, the applicant can commence clinical studies in the U.S. of the product candidate in humans to determine safety and efficacy. Following clinical studies, the marketing of a new drug requires the filing of a New Drug Application, or NDA, with the FDA and its subsequent approval (similar requirements exist within foreign agencies). The process required by the FDA and comparable agencies before a pharmaceutical or diagnostic product may be marketed in the U.S. or in any other country generally requires many years and substantial effort and financial resources and approval from the FDA may not be granted in a timely manner, if at all. The time required to satisfy FDA requirements or similar requirements of foreign regulatory agencies may vary substantially based upon the type, complexity and novelty of the product or the targeted disease. Even if a product receives regulatory approval, later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market.

Under the FDA's regulations, the clinical testing program required for marketing approval of a new drug typically involves three sequential phases, which may overlap. Phase I: Studies are conducted on normal, healthy human volunteers to determine safety, dosage tolerance, absorption, metabolism, distribution and excretion. If possible, Phase I studies may also be designed to gain early evidence of effectiveness. Phase II: Studies are conducted on small groups of patients afflicted with a specific disease to gain preliminary evidence of efficacy, to determine the common short-term side effects and risks associated with the substance being tested and to determine dosage tolerance and optimal dosage. Phase III: Involves large-scale studies conducted on disease-afflicted patients to provide statistical evidence of efficacy and safety and to provide an adequate basis for physician labeling. Frequent reports are required in each phase and, if unwarranted hazards to subjects are found, the FDA may request modification or discontinuance of clinical testing until further preclinical testing is conducted. Additional testing (Phase IV) may be conducted after FDA approval for marketing is granted and would be designed to evaluate alternative utilizations of drug products prior to their being marketed for such additional utilizations as well as to test for complications resulting from long term exposure not revealed in earlier clinical testing. Phase IV testing is often similar to Phase II evaluation of efficacy testing using a carefully selected clinical population.

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.

Employees

As of December 31, 2003, we employed 207 persons, of whom 53 hold PhD or MD degrees and 26 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 December 31, 2003 are as follows:

Name	Age	Position
Executive Officers & Directors		
Antonius Schuh, PhD	40	President, Chief Executive Officer and Director
Charles R. Cantor, PhD	61	Chief Scientific Officer and Director
Stephen L. Zaniboni	46	Chief Financial Officer
Andreas Braun, MD, PhD	47	Chief Medical Officer
Jay Lichter, PhD	41	Executive Vice President of Business Development
Michael Terry	49	Executive Vice President of Sales and Marketing
John Nestor, Jr., PhD	58	Executive Vice President of Drug Discovery
Richard Macdonald, PhD	55	Executive Vice President of Bioinformatics and Information Technology

Antonius Schuh, PhD Dr. Schuh was appointed President, Chief Executive Officer and a member of our board of directors in May 2000. Dr. Schuh joined our German subsidiary as Managing Director in December 1996 and was promoted to Executive Vice President, Business Development and Marketing, in 1998 when he moved to our headquarters in San Diego, California. From 1993 until joining us, Dr. Schuh was with Helm AG, an international pharma/chemical trading and distribution corporation. While at Helm AG, he established and headed the Pharma Business Development Group and the associated technical and regulatory affairs department. Prior to that, from 1992 to 1993, he was with Fisons Pharmaceuticals. Dr. Schuh earned his Ph.D. in pharmaceutical chemistry from the University of Bonn, Germany.

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.

Stephen L. Zaniboni 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.

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.

Jay Lichter, PhD Dr. Lichter joined us as Executive Vice President of Business Development in November 2001 to support the licensing of candidate disease genes and collaborations with pharmaceutical companies. Prior to joining us, Dr. Lichter was President and CEO of XenoPharm, Inc., a biotechnology start-up company where he began in February 2001. From September 2000 to February 2001, he was Vice President, Chief Business Officer at 454 Corporation, a subsidiary of Curagen Corporation. Dr. Lichter has also held management positions at Pfizer, Inc. from September 1999 to September 2000, Genset Corporation from January 1998 to August 1999, and was a co-founder of Sequana Therapeutics from 1993 through January 1998. Dr. Lichter received his Ph.D. at the University of Illinois in biochemistry.

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.

John Nestor, Jr., PhD Dr. Nestor joined us in June 2003 as Executive Vice President of Drug Discovery. From 1999 to 2003, he worked at Consensus Pharmaceuticals and was promoted to President and Chief Scientific Officer. From 1996 to 1999, he served as Executive Vice President and Vice President of the Board of Directors at Helios Pharmaceuticals, a chemistry-focused drug discovery company that he co-founded. Previously, Dr. Nestor was a Distinguished Scientist at Roche Bioscience. He was also Vice President and Director of the Syntex Institute of Bio-Organic Chemistry at Syntex Discovery Research. Dr. Nestor is co-inventor of 10 compounds that have reached the clinical development stage, including three that are now marketed drugs, co-inventor on more than 40 U.S. patents and author of more than 60 scientific articles. Dr. Nestor received his Ph.D. in organic chemistry from the University of Arizona.

Richard Macdonald, PhD Dr. Macdonald joined us in 1998 and was promoted to Executive Vice President, Bioinformatics and Information Technology in 2001. Prior to joining us, Dr. Macdonald worked at Molecular Simulations, Inc. as Lead Scientist of Bioinformatics. He held key positions at Syntro Corporation from 1982 to 1990, and he was an Assistant Professor at the University of Calgary from 1977 to 1982. Dr. Macdonald received his Ph.D. in molecular biology from the University of California at Berkeley.

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 in the SEQUENOM Pharmaceuticals business unit, are still in the early stages of development. For the SEQUENOM Genetic Systems business unit, we have a limited history of commercial 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 in the life science and pharmaceutical industries. We need to make significant investments to ensure our products perform properly and are cost-effective. We will need to obtain 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, pharmaceutical or other markets and 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, 2003, our accumulated deficit was approximately $381.4 million. These losses have resulted principally from costs incurred in research and development, from selling, general and administrative costs 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 costs as well as costs associated with consolidating and completing the integration of any business or technology that we may acquire in the future. Our general and administrative costs are likely to increase as we seek to comply with evolving standards for corporate governance and public disclosure, and as we continue to file and prosecute patent applications protecting our inventions. In addition, if we acquire other businesses or technologies we could incur significant costs in the consolidation and integration of these acquired businesses or technologies. During 2001 and 2002 we acquired two businesses and have incurred approximately $27 million of costs related to the transaction costs associated with the acquisitions, costs to close facilities and costs related to severance of employees and contract termination costs. To achieve profitability, we would need to generate significant additional revenue with positive gross margins. It is uncertain when, if ever, we will become profitable as a company, or when, if ever, the SEQUENOM Genetic Systems or SEQUENOM Pharmaceutical business units 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 recently introduced lower-throughput benchtop version of our MassARRAY platform, also known as our Compact system.
- 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 research and development progress, particularly in our SEQUENOM Pharmaceuticals business unit;
- our ability to identify, validate, 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 conduct preclinical studies and clinical trials of any potential therapeutic, diagnostic or other 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.

For the Genetic Systems business unit, 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. For the Pharmaceuticals business unit, our revenues and operating results are difficult to predict because they largely 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. 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, 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 at least through 2005. 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, and particularly including our level of investment in drug discovery and development programs in the SEQUENOM Pharmaceuticals business unit;
- 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; and
- regulatory changes 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.

A decline in the demand for MassARRAY systems and consumables, or a demand for less expensive versions of the MassARRAY system, would reduce our total revenues and harm our business. We expect that sales of MassARRAY systems and consumables will account for a substantial portion of our total revenues for the foreseeable future. Revenues from MassARRAY systems and consumables represented

approximately 80% of our total revenues in the year ended December 31, 2003. We have recently experienced reduced demand over the past two quarters for our highest throughput and largest capacity versions of the MassARRAY system. 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;
- 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 and services provided to pharmaceutical and biotechnology companies 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 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. Revenues from MassARRAY consumables totaled approximately $15 million or 53% of our total revenues in the year ended December 31, 2003. 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;
- 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.

Our sales cycle for the products sold by our SEQUENOM Genetic Systems business unit is typically lengthy. Our sales cycle for licensing the SNP and gene target discoveries from our Pharmaceuticals business unit is typically lengthy. Our sales efforts and our licensing efforts require the effective demonstration of the benefits 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.

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 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), Majer Precision Engineering, Inc. supplies the pins for the pintools, and Beckman Coulter, Inc. supplies the liquid handling device. 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 pintool 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 successfully develop or derive revenues from our gene discovery programs.

The SEQUENOM Pharmaceuticals business unit's gene discovery programs are still in a relatively early stage of implementation, continue to evolve, and may not result in marketable products. We are directing our technology and development focus primarily toward identifying and validating genes that are believed to be responsible for, or indicate the presence of, certain diseases. Although we have selected over 60 candidate disease genes for licensing and further development, we may not generate any revenue from the development or licensing of these disease genes. We have also commenced internal preclinical drug discovery programs for only a small number of these selected disease genes and related targets. Our technologies and approach to gene discovery may not enable us to successfully identify the specific genes that cause or predispose individuals to the complex diseases that are the targets of our efforts. The diseases we are targeting 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 we are successful in identifying specific genes, our discoveries may not lead to the development of commercial products, or otherwise generate revenue.

A reduction or lack of revenues from service contracts and collaborations would harm our business.

Lack of demand for our genetic services or a reduction in the level of services performed on behalf of collaborators would reduce our total revenues and harm our business. We expect that revenue from service and research contracts may account for a small portion of our total revenues for the foreseeable future. The following factors, among others, may reduce or eliminate the demand for our services and reduce or eliminate revenues generated from such services:

- changes in fiscal policies and the economy which negatively impact customer buying decisions;
- negative publicity or evaluations or skepticism about the medical relevance of SNPs;
- our ability to secure further collaborations on favorable terms; or
- technological changes rendering our services uncompetitive.

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

Development of therapeutic, diagnostic and other products based on our discoveries or our collaborative partners' discoveries will be 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 collaborator or we discover therapeutic, diagnostic or other products using our products, services or discoveries in a collaboration, we may rely on that collaborator 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 collaboration agreement. If we are unable to successfully achieve milestones or our collaborative partners fail to develop successful products, we will not earn the revenues contemplated. Our collaboration agreements may allow our collaborators significant discretion in electing whether to pursue any of these activities. We cannot control the amount and timing of resources our collaborators may devote to our programs or potential products. As a result, we cannot be certain that our collaborators will choose to develop or commercialize any products or will be successful in doing so. In addition, if a collaborator 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 collaborator.

We may not successfully obtain regulatory approval of any therapeutic, diagnostic or other product which we or our 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. Commercialization of any therapeutic, diagnostic or other product that we or our collaborators 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, or any of our collaborative partners, would be permitted or able to undertake clinical trials of any potential products. It may take us or our collaborative partners 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 collaborative partners could decide to discontinue development of any or all of these projects at any time for commercial, scientific or other reasons.

If we do not have adequate access to genetic materials, we will not be able to develop our pharmaceuticals business.

We depend on others for the collection of extensive and detailed clinical data and the collection and storage of large quantities of genetic material, such as DNA, and other biological samples. We need access to normal and diseased human tissue samples and other biological materials and the related clinical and other information to develop our products and services. We currently acquire these samples from multiple sources, including universities, research institutions, corporations and other sample providers. We may not be able to obtain or maintain access to these materials and information. If the validity of the consents obtained from our volunteers or our collaborators' volunteers were to be challenged, we could lose access to valuable genetic material and information. Government regulation in the United States and foreign countries could result in restricted access to or use of human DNA and other types of samples. If we were to lose access to sufficient numbers or sources of tissue samples, or if tighter restrictions were to be imposed on our use of the information generated from samples, our business would suffer.

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 and validation programs.

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 to be used for purposes which extend to cover our gene discovery programs and other 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 programs. 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 or become profitable.

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. 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 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 candidate disease genes 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 strategic 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 products and generate any milestone, royalty or other revenue from sales of these products. 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 collaborations or licensing arrangement. If we increase the number of collaborations, it will become more difficult to manage the various collaborations successfully and the potential for conflicts among the collaborators will increase. Conflicts with our collaborators 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 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. 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. 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 usually require agreement periods or notice of termination periods of a longer duration, or require that such agreements may not be terminated arbitrarily or without good reason such as uncured breach or insolvency, such provisions may not provide adequate protection.

We may not successfully integrate acquired businesses.

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

- the inability to retain key employees of any acquired businesses or hire enough qualified personnel to staff any new or expanded operations;
- the impairment of relationships with key customers of acquired businesses due to changes in management and ownership of the acquired businesses;
- the inability to sublease on financially acceptable terms excess leased space or terminate lease obligations of acquired businesses that are not necessary or useful for the operation of our business;
- the exposure to federal, state, local and foreign tax liabilities in connection with any acquisition or the integration of any acquired businesses;
- the exposure to unknown liabilities;
- higher than expected acquisition and integration costs 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, services and strategies to analyze genetic information and strategies to develop and commercialize therapeutic and diagnostic products. 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 100 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 SEQUENOM Pharmaceuticals. 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. 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, pharmaceutical, 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. We have experienced a number of employees in our sales department leaving the company and we have been and continue to hire new employees in this capacity. We expect that there may be some delay before we see successful sales results from these new hires, and if so, our sales revenues may decline. 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 Antonius Schuh, PhD, our President, Chief Executive Officer and a director, Charles R. Cantor, PhD, our Chief Scientific Officer and a director, or Andreas Braun, MD, PhD, our Chief Medical 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. 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 units, it could affect our ability to pursue business opportunities and expand our business. We have restructured our business into the SEQUENOM Pharmaceuticals and SEQUENOM Genetic Systems business units and face additional challenges in effectively managing these units. We may continue to restructure our company and units which could put additional strain on management.

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% of our revenues were generated from sales outside of the

United States in the year ended December 31, 2003. 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 foreign 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, therapeutic and diagnostic development and commercialization agreements with others;
- changes in securities analysts' earnings projections or securities analysts' recommendations; and
- 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. Since January 1, 2002, the closing price of our common stock has fluctuated between a high of $10.30 per share during the first quarter of 2002 to a low of $1.31 per share during the last quarter of 2002. Sharp drops in the market price of our common stock expose us to securities class-action litigation. Such litigation could result in substantial costs 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 proposed settlement is included under Item 3 of this annual report.

In addition, The Nasdaq National Market imposes, among other requirements, listing maintenance standards as well as minimum bid and public float requirements. During the last quarter of 2002, the closing price of our common stock fell to a low of $1.31 per share. If the closing bid price of our common stock falls below $1.00 per share for thirty consecutive trading days, Nasdaq may choose to delist our common stock from

the Nasdaq National Market. If the stock were delisted, the ability of our shareholders to sell their common stock would be negatively affected.

We have adopted anti-takeover provisions that may limit the ability of another party to acquire us and may prevent or frustrate any stockholder 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. 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.

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 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, 92101, 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 and Cambridge, Massachusetts. Collectively, we lease approximately 126,000 square feet under leases that expire from June 2004 to December 2015, each of which contains laboratory, office, manufacturing, or storage facilities. The locations are:

San Diego, California (utilized by both genetic systems and pharmaceutical business units)

Newton, Massachusetts (surplus space)

Cambridge, Massachusetts (utilized by genetic systems)

Hamburg, Germany (utilized by genetic systems)

Cambridge, England (utilized by both genetic systems and pharmaceutical business units)

Queensland, Australia (utilized by genetic systems)

The San Diego site is company headquarters and houses our selling, general and administrative offices, research and development facilities and manufacturing operations. The sites in Hamburg and Cambridge, 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. We do not know how long it will take us to sublease our remaining surplus space in Newton, Massachusetts. Excluding the identified surplus space, we believe our facilities are adequate for our current needs and that suitable additional or alternative space will be available in the future on commercially reasonable terms as needed.

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 (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, and we await the preparation by the plaintiffs of a settlement agreement. In September 2003, in connection with the possible settlement, our officers and directors who had entered into tolling agreements with plaintiffs (described above) agreed to extend those agreements so that they would not expire prior to any settlement being finalized. Although we have approved this settlement proposal in principle, it remains subject to a number of procedural conditions, as well as formal approval by the Court. 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 2003.

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, 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
Year Ended December 31, 2002:		
Fourth Quarter	$ 2.55	$1.31
Third Quarter	2.99	1.54
Second Quarter	6.95	3.17
First Quarter	10.30	5.35

There were approximately 393 holders of record of our common stock as of February 27, 2004. We have not paid any cash dividends to date and do not anticipate any being paid in the foreseeable future.

(b) (b) On January 30, 2004, we filed a shelf registration statement on Form S-3 with the Securities and Exchange Commission, or SEC, to sell common stock and/or warrants to purchase common stock over time in one or more offerings up to a maximum aggregate initial offering price of $50,000,000. This registration statement has not yet been declared effective by the SEC.

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,				
	2003	2002	2001[1]	2000	1999
	(In thousands, except per share data)				
Consolidated statements of operations data					
Revenues:					
Product	$ 28,334	$ 24,868	$ 21,524	$ 8,253	$ –
Services	1,596	5,646	8,942	1,447	–
Research	322	371	269	337	179
Total revenues	30,252	30,885	30,735	10,037	179
Costs and expenses:					
Cost of product and service revenue	17,089	17,474	19,780	6,574	–
Research and development	25,425	33,451	29,327	18,433	10,291
Selling, general and administrative	23,125	28,464	24,167	18,492	8,239
Impairment of assets and goodwill	–	33,126	–	–	–
In process research and development	–	3,668	24,920	–	–
Integration costs	–	3,000	–	–	–
Amortization of acquired intangibles	3,434	3,734	935	–	–
Amortization of deferred stock compensation	187	418	939	3,741	4,376
Total costs and expenses	69,260	123,335	100,068	47,240	22,906
Loss from operations	(39,008)	(92,450)	(69,333)	(37,203)	(22,727)
Other income (expense):					
Interest income	1,631	3,865	6,796	8,925	1,578
Interest expense	(680)	(408)	(343)	(4,683)	(790)
Impairment of equity investment	–	(1,000)	–	–	–
Other (expense) income, net	139	(63)	248	75	169
Loss before income taxes and cumulative effect of accounting change	(37,918)	(90,056)	(62,632)	(32,886)	(21,770)
Deferred income tax benefit	1,237	1,309	–	–	–
Net loss before cumulative effect of accounting change	(36,681)	(88,747)	(62,632)	(32,886)	(21,770)
Cumulative effect of accounting change	–	(116,947)	–	–	–
Net loss	$ (36,681)	$(205,694)	$(62,632)	$(32,886)	$(21,770)
Net loss per share, basic and diluted:					
Before cumulative effect of accounting change	$ (0.93)	$ (2.32)	$ (2.25)	$ (1.46)	$ (26.23)
Cumulative effect of accounting change	–	$ (3.07)	–	–	–
Net loss per share, basic and diluted	$ (0.93)	$ (5.39)	$ (2.25)	$ (1.46)	$ (26.23)
Shares used in computing net loss per share, basic and diluted	39,487	38,150	27,816	22,454	830

	As of December 31,				
	2003	2002	2001[1]	2000	1999
Consolidated balance sheet data					
Cash, cash equivalents, short-term investments and restricted cash	$ 67,454	$102,550	$143,135	$138,424	$21,616
Working capital	55,456	85,370	126,648	134,519	18,518
Total assets	104,936	152,608	356,381	166,262	29,753
Total long-term obligations	5,681	9,742	2,842	1,827	7,326
Total stockholders' equity	72,015	108,249	308,602	144,939	17,539

(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 Annual Report on Form 10-K under the caption "Risks and Uncertainties Related to Our Business". 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 trademarks of SEQUENOM, Inc.

Overview

We are a genetics company organized into two distinct business units: SEQUENOM Genetic Systems and SEQUENOM Pharmaceuticals. We have created high performance DNA analysis technology and a platform that efficiently and precisely measures genetic variation. Both business units capitalize on this platform together with our detailed knowledge of specific genetic variations in humans.

Since our inception, we have incurred significant losses. As of December 31, 2003, we had an accumulated deficit of $381.4 million. We expect SEQUENOM Genetic Systems to reduce its losses going forward, and expect to continue to incur losses for the foreseeable future in SEQUENOM Pharmaceuticals as we continue our research and development efforts in that unit.

SEQUENOM Genetic Systems. This business unit includes the sales and support of our MassARRAY hardware, consumables and software product offerings, and research and development directed toward new products and applications for the MassARRAY platform. We have sold our products to genetics, pharmacogenetics, diagnostic, and agricultural biotechnology companies, as well as leading research

institutions, in North America, Europe, and Asia. As of December 31, 2003, our product revenues consisted of revenues from the sales of MassARRAY systems and MassARRAY consumables, maintenance agreements for systems, and sales and licensing of proprietary software.

In 2003, we began marketing the MassARRAY Compact system, a smaller and lower-throughput benchtop version of our MassARRAY platform. This version provides comparable data quality to the higher throughput version but has an upfront capital cost of approximately one half of that of the higher throughput version, which may expand our market potential. We expect SEQUENOM Genetic Systems to launch other new products and product applications periodically. The impact of the MassARRAY Compact system and other new products and product applications on revenues, margins, expenses, and cash flows is uncertain and depends on many factors as described in this Annual Report on Form 10-K under the caption "Risks and Uncertainties Related to Our Business".

SEQUENOM Pharmaceuticals. This business unit includes the provision of genetic services and operations relating to disease gene discovery, target identification, functional validation, and ultimately potential diagnostic and therapeutic product development. SEQUENOM Pharmaceuticals applies human genetics to systematically identify potential disease-associated genes that affect significant portions of the overall population. This segment's revenues consist of genetic validation services, royalties on licensed technology, and research.

Prior to December 31, 2003, we completed 12 scans of the human genome. Through these scans, we 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. We typically replicate our initial disease-association findings in additional independent populations followed by appropriate biological confirmation experiments where feasible. We have begun internal development on a small number of our validated genetic targets. Our goal is to develop these disease-related gene targets to ultimately produce therapeutic and diagnostic products, predominantly through partnering with pharmaceutical, diagnostic and biotechnology companies.

Revenues may fluctuate significantly as revenues are expected to be based upon out-licensing of gene and target-related intellectual property, and the obligations and timing of any licensing and milestone payments and the timing of any future diagnostic and therapeutic product sales. These are all factors that are uncertain and difficult to predict. To reach the ultimate goal of diagnostic or therapeutic product sales, significant dollar amounts will need to be invested in research and development efforts and regulatory approvals over several years. The timing and impact of revenues and expenses is uncertain and depends on many factors as described in this Annual Report on Form 10-K, under the caption "Risks and Uncertainties Related to Our Business".

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", revenues are recognized, when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed and determinable and collectibility is reasonably assured. We consider EITF 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables", and for MassARRAY system sales, the arrangement consideration is allocated among the separate units of accounting based on their relative fair values. The separate units of accounting are typically the system and software itself and maintenance contracts sold at the time of the system sale. Revenue is deferred for fees received before earned. Revenues from sales of the MassARRAY system and consumables are recognized generally upon shipment and transfer of title to the customer. 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." Amounts accrued relating to acquisition and integration costs totaled $27.0 million and as of December 31, 2003 approximately $1.4 million remained accrued. This amount represents the remaining balance of what we expect to incur related to our surplus facility lease costs. We do not know how long it will take us to sublease our remaining surplus space. The amount accrued at December 31, 2003 represents approximately 30 months of remaining lease payments, net of sublease income from existing subleased space, and if we do not sublease the remaining space by the end of that term we will incur additional expense of approximately $50,000 per month for 54 more months.

- *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. 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 $11.3 million, net of accumulated amortization, at December 31, 2003.

- *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 2003, slow-moving inventory reserves of $2.3 million were charged to cost of goods sold, and the total reserve was $1.9 million at December 31, 2003.

New Accounting Pronouncements

In May 2003, the Financial Accounting Standards Board ("FASB") issued SFAS No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity. SFAS No. 150 affects the issuer's accounting for three types of freestanding financial instruments; (a) mandatorily redeemable shares which the issuing company is obligated to buy back in exchange for cash or other assets, (b) put options and forward purchase contracts that do or may require the issuer to buy back some of its shares in exchange for cash or other assets, and (c) obligations that can be settled with shares, the monetary value of which is fixed, ties solely or predominantly to a variable such as a market index, or varies inversely with the value of the issuer's shares. SFAS No. 150 also requires disclosures about alternative ways of settling the instruments and the capital structure of entities. SFAS No. 150 is effective for all financial instruments entered into or modified after May 31, 2003 and for all periods beginning after June 15, 2003 except for mandatorily redeemable financial instruments of nonpublic entities which are subject to the provisions of SFAS No. 150 for the first fiscal period beginning after December 15, 2003. The adoption of SFAS No. 150 has not had and we do not anticipate will have a material impact on our consolidated financial statements.

In November 2002, the FASB issued FASB Interpretation No. 45 ("FIN 45"), Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others. FIN 45 requires a liability to be recorded in the guarantor's balance sheet upon issuance of a guarantee. In addition, FIN 45 requires disclosures about the guarantees that an entity has issued, including a reconciliation of changes in the entity's product warranty liabilities. The initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. The disclosure requirements of FIN 45 are effective for financial statements ending after December 15, 2002. The adoption of FIN 45 has not had a material impact on our consolidated financial statements.

In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51." FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. In December 2003, the FASB issued FIN 46R, a revision to FIN 46. FIN 46R provides a broad deferral of the latest date by which all public entities must apply FIN 46 to certain variable interest entities to the first reporting period ending after March 15, 2004. We do not expect the adoption of FIN 46 to have a material impact upon our financial position, cash flows or results of operations.

RESULTS OF OPERATIONS – CONSOLIDATED

Years ended December 31, 2003, 2002 and 2001

Overview

Revenues

Total revenues were $30.3 million, $30.9 million and $30.7 million for the years ended December 31, 2003, 2002, and 2001, respectively. During the years ended December 31, 2003, 2002 and 2001, product revenues were derived from the sale of MassARRAY systems, consumables including our proprietary SpectroCHIP bioarray, sales and licensing of our proprietary software and license fees from end-users. From the year ended December 31, 2001 to the year ended December 31, 2003, consumable revenues increased by $11.1 million, or 242%, due to increased numbers of systems in place with customers and an increase in the average consumable spend per installed system. During the same period, MassARRAY hardware sales declined by 44% to $8.3 million from $14.7 million as the marketplace for high throughput systems became increasingly saturated. Service revenues decreased to $1.6 million in 2003, from $5.6 million in 2002 and from $8.9 million in 2001. The continued reduction in service revenue is because we have chosen to dedicate most of our capacity to internal discovery genetics programs and not to pursuing low-margin collaborative genotyping services as our existing contracts were completed. We expect that future revenues will be affected by, among other things, customer budgets, new product and application introductions, competitive conditions and government research funding.

Cost of product and service revenues

Cost of product and service revenues were $17.1 million, $17.5 million and $19.8 million and gross margins were 44%, 43% and 36% for the years ended December 31, 2003, 2002, and 2001, respectively. The increasing gross margin reflects the shift in revenue from lower-margin genetic service contracts towards higher-margin consumables and hardware sales.

Research and development costs

Research and development costs decreased to $25.4 million from $33.5 million after increasing from $29.3 million in the years ending December 31, 2003, 2002, and 2001, respectively. The reduction in costs from 2002 to 2003 resulted from site consolidation following the Gemini Genomics and Axiom acquisitions in the fourth quarter of 2001 and 2002, respectively, reducing expenses by $2.4 million, reduced headcount following cost reductions in late 2002 reducing salary expenses by $1.4 million, a reduction in laboratory supplies of $0.9 million, increased absorption of production costs into inventory of $1.4 million, an elimination of bonuses paid to senior management reducing costs by $0.5 million and $1.5 million of general cost reduction. We expect headcount in this area to increase during 2004 as we develop internal resources to help move our genetic discoveries towards proven drug targets. The increase in costs from 2001 to 2002 was primarily a result of the acquisition of Gemini Genomics and Axiom.

Sales, general and administrative costs

Sales, general and administrative costs decreased by $5.4 million to $23.1 million in the year ended December 31, 2003 after increasing to $28.5 million in the year ended December 31, 2002 from $24.2 million in the year ended December 31, 2001. The increase of $4.3 million from 2001 to 2002 was largely due to increased costs resulting from the acquisition of Gemini Genomics and Axiom in the fourth quarters of 2001 and 2002, respectively. The decrease in 2003 related to cost savings in settlement agreements for legal disputes of $1.6 million, a reduction in legal fees of $0.3 million due to fewer

legal disputes, $1.1 million from overseas headcount and site reduction following the closure of locations and elimination of headcount acquired during the mergers that were considered to be in excess of our current and future needs, reducing salary expenses by $1.3 million, an elimination of bonuses paid to senior management reducing costs by $0.8 million. The remaining reduction of $0.4 million was a result of general expense control. We expect headcount to increase during 2004 as we strengthen our sales and field support operations.

Impairment of assets and goodwill

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 in the SEQUENOM Pharmaceuticals segment 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, $7.0 million relating to SEQUENOM Pharmaceuticals and the remaining $1.1 million relating to SEQUENOM Genetic Systems.

In-process research and development

In connection with the acquisition of Axiom Biotechnologies in 2002 and Gemini Genomics in 2001, we recorded a non-cash in-process research and development charge of $3.7 and $24.9 million, respectively.

Both amounts represented the value of the research and development projects acquired from Axiom Biotechnologies and Gemini Genomics 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 relates 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 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. The 2001 amortization of approximately $0.9 million represents the amortization of the Gemini Genomics intangible assets from the date of acquisition in September 2001 through the end of 2001.

Amortization of deferred stock-based compensation

Deferred stock compensation represents the difference between the estimated fair value of our common stock and the exercise price of options at the date of grant. During the year ended December 31, 2003, we recorded amortization of deferred stock compensation totaling $0.2 million, compared to $0.4 million in 2002 and $0.9 million in 2001. These amounts all relate to stock options granted prior to our initial public offering in January 2000 and were amortized over the vesting periods of the individual stock options in accordance with FASB Interpretation No. 28. Amortization was completed during 2003. We do not expect any additional deferred compensation or amortization of deferred compensation in 2004.

Interest income

Interest income was $1.6 million in 2003, compared to $3.9 million in 2002, and $6.8 million in 2001. The decrease from 2002 to 2003 and from 2001 to 2002 resulted from lower interest rates and lower average balances of interest-bearing investments.

Interest expense

Interest expense was $0.7 million in 2003, compared to $0.4 million in 2002, and $0.3 million in 2001. The increase over the three years 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 and $1.3 million in 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. 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.

Under SFAS No. 142, goodwill impairment is deemed to exist if the net book value of a reporting unit exceeds its estimated fair value. No amortization on the goodwill arising as a result of our acquisition of Gemini Genomics in September 2001 was recognized during 2001 in accordance with the transition arrangements in SFAS No. 142. Quarterly and annual results as reported are therefore comparable.

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, 2003, we have provided a full valuation allowance against deferred tax assets of $100.5 million, reflecting uncertainties associated with future profitability.

At December 31, 2003, we have federal and state tax net operating loss carryforwards of approximately $175.6 million and $64.1 million, respectively. The difference between the federal and state tax loss carry-forwards 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 $455,000 of the state tax loss carryforwards will expire in 2004 and the state tax loss carry-forwards will continue to expire in 2005 unless previously utilized.

We also have German and United Kingdom (UK) net operating loss carryforwards of approximately $10.1 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 $5.6 million and $5.4 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 the Company's 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.

Business segment highlights for the year ended December 31, 2003 and 2002:

	Year Ended					
	December 31, 2003			December 31, 2002		
($ in thousands)	SEQUENOM Genetic Systems	SEQUENOM Pharmaceuticals	Total	SEQUENOM Genetic Systems	SEQUENOM Pharmaceuticals	Total
Product sales	$ 28,164	$ 170	$ 28,334	$ 24,762	$ 106	$ 24,868
Validation services	–	1,596	1,596	–	5,646	5,646
Research	–	322	322	55	316	371
Total revenues	28,164	2,088	30,252	24,817	6,068	30,885
Cost of product and service revenue	15,697	1,392	17,089	13,201	4,273	17,474
Research and development	10,901	14,524	25,425	16,234	17,217	33,451
Selling, general and administrative	16,609	6,516	23,125	21,875	6,589	28,464
Impairment of assets and goodwill	–	–	–	1,134	31,992	33,126
In-process research and development	–	–	–	–	3,668	3,668
Integration costs	–	–	–	–	3,000	3,000
Amortization of acquired intangibles	–	3,434	3,434	–	3,734	3,734
Amortization of deferred stock compensation	140	47	187	334	84	418
Total costs and expenses	43,347	25,913	69,260	52,778	70,557	123,335
Loss from operations	$(15,183)	$(23,825)	$(39,008)	$(27,961)	$(64,489)	$(92,450)

Segment financial information for the year ended December 31, 2002 has been reclassified between the segments to reflect our view of the business segment allocation. Genetic service revenue of approximately $5.5 million and associated cost of product and service revenue of approximately $3.8 allocated to SEQUENOM Genetic Systems in the year ended December 31, 2002, have been reallocated to SEQUENOM Pharmaceuticals to conform with current year presentation in the segmental information provided above.

Prior to 2002, we operated in one business segment making it impracticable to provide separate financial information for SEQUENOM Genetic Systems and SEQUENOM Pharmaceuticals.

We do not currently segregate assets by segment because a significant portion of our total assets are assets commonly used by both segments and cash, cash equivalents and marketable securities. We are evaluating the feasibility and usefulness of assigning our other assets to SEQUENOM Genetic Systems and SEQUENOM Pharmaceuticals segments and may report assets by segment in the future.

RESULTS OF OPERATIONS – SEQUENOM GENETIC SYSTEMS

Years ended December 31, 2003 and 2002

Revenues

Revenues for the year ended December 31, 2003 increased by $3.4 million, or 14%, from the year ended December 31, 2002, from $24.8 million to $28.2 million, primarily from an increase in sales of consumables from $9.3 million to $15.7 million offsetting a reduction in hardware sales from $12.8 million in 2002 to $8.3 million in 2003. Consumable sales increased as the installed base of MassARRAY systems and the average value of consumables used by each system increased in 2003 from 2002. Hardware sales slowed during the same period as the market for high throughput systems became increasingly saturated. We anticipate that commercial sales of the Compact system during the first quarter of 2004 may increase hardware sales by addressing the needs of customers with smaller throughput requirements. Domestic and non-US revenues were $13.0 million and $15.2 million for the year ended December 31, 2003 and $13.0 million and $11.8 million for the year ended December 31, 2002, respectively. We expect the decline in hardware sales volume to be reversed in 2004 through the introduction of our lower throughput MassARRAY Compact system.

Cost of Product Revenues and Gross Margin

Cost of product revenues for the years ended December 31, 2003 and 2002 was $15.7 million and $13.2 million, respectively. Gross margin for the years ended December 31, 2003 and 2002 was 44% and 47%, respectively. The decrease in the gross margin percentage in 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. Gross margin in future periods will be affected by, among other things, the mix of products sold, competitive conditions, sales volumes, and royalty payments on in-licensed technologies.

Research and Development Expenses

These expenses consist primarily of salaries and related personnel costs, and costs related to developing next generation MassARRAY products and product applications. Research and development expenses declined by $5.3 million to $10.9 million in the year ended December 31, 2003 from $16.2 million in the year ended December 31, 2002, primarily resulting from a decrease in personnel and research spending

of $2.8 million, the transfer of resources to the SEQUENOM Pharmaceuticals segment decreasing segmental expenses by $3.5 million, and $1.4 million from an increase in costs absorbed into cost of product revenues, and offset by $2.4 million in costs relating to products discontinued in the research and development phase in 2003.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the years ended December 31, 2003 and 2002 decreased to $16.6 million from $21.9 million. These expenses consist primarily of salaries and related costs for sales and marketing, customer support, legal, finance and human resource personnel, and their related functions' expenses. The $5.3 million decrease from 2002 to 2003 resulted from a transfer of resources to the Pharmaceutical segment of $3.6 million compared to 2002 spending levels, and a reduction of expenses from a reduction in personnel costs of $1.6 million and other associated costs.

RESULTS OF OPERATIONS – SEQUENOM PHARMACEUTICALS

Years ended December 31, 2003 and 2002

Revenues

Total revenues for the SEQUENOM Pharmaceuticals segment decreased to $2.1 million from $6.1 million for the years ended December 31, 2003 and 2002, respectively, following the completion of a major collaboration in June, 2002. We derived these revenues from the completion of significant phases of genetic service projects. Total domestic and non-US revenues were $1.6 million and $0.5 million, respectively, for the year ended December 31 2003 and $5.8 million and $0.3 million, respectively, for the year ended December 31, 2002. The service revenue marketplace is competitive, tends to be lower margin, and we do not anticipate significant revenue from this area in the short term, if at all. We are not actively pursuing further large genetic service contracts, focusing our resources on internal research and development programs.

Research revenues for the year ended December 31, 2003 were approximately $322,000, decreasing from $316,000 for the year ended December 31, 2002. In 2003, $120,000 resulted from a research contract assumed in connection with the acquisition of Axiom, for which we recognized $233,000 in 2002. This research contract was completed during the first quarter of 2003 and no further revenue is anticipated. The remaining decrease arose from other research contracts and grant funding received.

We expect that future revenues will be affected by, among other things, customer budgets, competitive conditions and government research funding.

Cost of Revenue and Gross Margin

Cost of revenues for the years ended December 31, 2003 and 2002 were $1.4 million and $4.3 million, respectively. Gross margin for the years ended 2003 and 2002 were 33% and 30%, respectively. Gross margins on services are dependent on the particular contract terms of the work undertaken in each year.

Research and Development Expenses

Research and development expenses for the years ended December 31, 2003 and 2002 were $14.5 million and $17.2 million, respectively. These expenses consist primarily of salaries and related personnel costs, materials costs, costs related to our disease gene discovery programs, and costs relating to work performed under research contracts. The $2.7 million decrease resulted from the disposition of two foreign locations in 2002, reducing our headcount and operating expenses by

$2.3 million, headcount reduction and reduced research spend of $2.3 million, partially offset by reallocation of existing resources toward Pharmaceutical research from the Genetic Systems segment increasing segmental expenses by $1.9 million.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the years ended December 31, 2003 and 2002 were $6.5 million and $6.6 million, respectively. These expenses consist primarily of salaries and related costs for business development, legal, finance and human resource personnel, and their related expenses. The decrease from 2002 to 2003 resulted primarily from savings arising from foreign and U.S. site consolidation and other cost reductions of $1.9 million offset by $1.8 million reallocated from the SEQUENOM Systems segment.

Liquidity and capital resources

As of December 31, 2003 cash, cash equivalents, short-term investments and restricted cash totaled $67.5 million, compared to $102.5 million at December 31, 2002. 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

Cash used in operations for the year ended December 31, 2003 was $29.7 million compared with $45.0 million in 2002. A net loss of $36.7 million in 2003 was partially offset by non-cash charges, including $10.8 million for depreciation and amortization expense and other non-cash items totaling $1.0 million. Inventory increases consumed $2.2 million during 2003 as we introduced new product lines and experienced a decrease in the number of system sales. We anticipate that inventory levels will decline during 2004 as we phase out older products and sell increasing numbers of Compact systems.

Cash provided by investing activities was $36.5 million. Investing activities, other than the changes in our short-term investments and restricted cash, used $2.4 million in cash during 2003 for expenditures on leasehold improvements, laboratory equipment, and acquisition of intangible items.

Cash used by financing activities was $3.0 million for the year ended December 31, 2003. Financing activities in 2003 included $2.2 million of proceeds from long term debt, repayments of long term debt and capital leases of $5.8 million, and $0.7 million of proceeds from Employee Stock Purchase Plan and stock option exercises.

Long Term

We filed a shelf registration statement on Form S-3 with the SEC on January 30, 2004 to sell common stock and/or warrants to purchase common stock over time in one or more offerings up to a maximum aggregate initial offering price of $50,000,000. This registration statement has not yet been declared effective by the SEC. We currently intend to use the net proceeds from any future sale of securities under this registration statement following its effectiveness for general corporate purposes, which may include research and development, capital expenditures, working capital, and preclinical development and general and administrative expenses. We may also use a portion of the net proceeds from any such sale to acquire or invest in businesses, products and technologies that are complementary to our own.

The following table summarized our contractual obligations as of December 31, 2003 ($ in thousands):

Contractual obligations	Total	Less Than 1 Year	1-3 Years	After 3 Years
Open purchase orders	$ 5,619	$ 5,619	$ –	$ –
Long-term debt	11,245	5,621	5,624	–
Capital lease obligations	508	451	57	–
Operating leases	55,141	4,478	9,173	41,490
Total contractual obligations	$72,513	$16,169	$14,854	$41,490

Future operating lease commitments for leases have not been reduced by minimum sublease rentals to be received through December 2010 aggregating $0.9 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 the Consolidated Financial Statements.

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 2005. 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, and particularly including our level of investment in drug discovery and development programs in the SEQUENOM Pharmaceuticals business unit;
- 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; and
- regulatory changes and technological developments in our markets.

We have a $15.1 million bank line of credit provided by the Union Bank of California, of which $8.6 million is outstanding and $6.5 million is available for borrowing and expires on January 31, 2005. We have no commitments for any additional financings. We filed a Form S-3 registration statement on January 30,

2004 to sell common stock and/or warrants to purchase common stock over time in one or more offerings up to a maximum aggregate initial offering price of $50,000,000. The registration statement has not yet been declared effective by the SEC. We currently intend to use the net proceeds from any future sale of securities for general corporate purposes, which may include research and development, capital expenditures, working capital, and preclinical development and general and administrative expenses. We may also use a portion of the net proceeds to acquire or invest in businesses, products and technologies that are complementary to our own. 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.

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.

	As of December 31, 2003 Net foreign monetary assets/(liabilities)		
Functional currency of operations	Euro	US dollars	GBP
		($ in millions)	
Great British Pound	–	$0.4	–
Euro	–	$0.5	$0.2

A movement of 10% in the US dollar to pound exchange rate would create an unrealized gain or loss of approximately $60,000. 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, 2003. We had no deferred gains or losses during the years ended December 31, 2003, 2002 or 2001.

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

Refer to the Index to the Financial Statements on Page F-I of the Financial Report included herein.

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

None.

Item 9a. CONTROLS AND PROCEDURES

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of 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 the end of the year ended December 31, 2003. Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures are effective as of the end of the year ended December 31, 2003.

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

Our management, including our principal executive officer and principal financial officer, does not expect that its disclosure controls will prevent all errors or potential fraud. A control system, no matter how well conceived and operated, can provide only reasonable and not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their cost. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons or by collusion of two or more people. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, control may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

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 to be held on May 14, 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.

We have adopted a code of business conduct and ethics for directors, officers (including our principal executive officer, principal financial officer and principal accounting officer) and 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 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 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, 2003.

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	4,719,205	$4.10	1,727,744[1][2]
Equity compensation plans not approved by security holders	[3]		
Total	4,719,205	$4.10	1,727,744

Footnotes

(1) Of the 1,727,744 shares available for issuance, 992,340 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.

A total of 644,197 options to purchase our common stock remain outstanding at a weighted average price of $19.65. Of these, 13,840 shares are reserved for issuance under the Gemini Genomics Company Share Option Plan-Part A, 89,547 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 129,183 options to purchase our common stock remain outstanding at a weighted average price of $4.40, 44,996 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 by reference from the information in the section entitled "Certain Transactions" in the Proxy Statement.

Item 14. PRINCIPAL ACCOUNTANTS FEES AND SERVICES

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

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(a)(1) *Financial Statements*

The financial statements of the Company are included herein as required under Item 8 of this report. See Index to Financial Statements on page F-I.

(a)(2) *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.

(b) *Reports on Form 8-K*

On October 10, 2003, we filed a report on Form 8-K dated October 6, 2003 relating to certain expected financial results for the fiscal quarter ended September 30, 2003. Under the Form 8-K, we furnished (not filed) pursuant to Item 12 under Item 7 a press release relating to certain expected financial results for our third fiscal quarter ended September 30, 2003.

On October 28, 2003, we filed a report on Form 8-K dated October 28, 2003 relating to our financial results for the three months and nine months ended September 30, 2003. Under the Form 8-K, we furnished (not filed) pursuant to Item 12 under Item 7 the press release relating to the financial results for our third fiscal quarter ended September 30, 2003, which furnished press release included our consolidated balance sheet as of December 31, 2002 and unaudited consolidated balance sheet as of September 30, 2003 and our unaudited consolidated statement of operations for the three months and nine months ended September 30, 2003.

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.

Exhibit Number	Description of Document
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.
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 June 30, 2000 between Toni Schuh and the Registrant.
10.21[6] #	First Amended and Restated Employment Agreement, dated as of August 1, 2000 between Steve Zaniboni and the Registrant.
10.22[6] #	First Amended and Restated Employment Agreement, dated as of August 1, 2000 between Andi Braun and the Registrant.
10.23[5] #	Form of Employment Agreement between Registrant and Charles Cantor, Ph.D.
10.24[8] *	Collaboration Agreement, dated December 17, 2003, by and between the Registrant and Procter & Gamble Pharmaceuticals, Inc.
10.25 #	Form of Exec-U-Care Plan.
10.26[1]	Amended and Restated Registration Rights Agreement, date December 21, 1998 among the Registrant and the parties named therein.
21.1	Subsidiaries of Registrant.
23.1	Consent of Ernst & Young LLP, Independent Auditors.
31.1	Certification of Chief Executive Officer pursuant to Rule13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act, as amended.
31.2	Certification of Chief Financial Officer pursuant to Rule13a-14(a) and Rule 15d-14(a) of the Securities and Exchange Act, as amended.
32	Certifications 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.

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 12, 2004

SEQUENOM, INC.

By: /s/ ANTONIUS SCHUH
Antonius Schuh
President, Chief Executive Officer
and Director

POWER OF ATTORNEY

Know all men by these presents, that each person whose signature appears below constitutes and appoints Antonius Schuh or 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/ ANTONIUS SCHUH, PH.D. Antonius Schuh, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	March 12, 2004
/s/ STEPHEN L. ZANIBONI Stephen L. Zaniboni	Chief Financial Officer (Principal Financial and Accounting Officer)	March 12, 2004
/s/ CHARLES R. CANTOR, PH.D. Charles R. Cantor, Ph.D.	Chief Scientific Officer and Director	March 12, 2004
/s/ HARRY F. HIXSON, JR., PH.D. Harry F. Hixson, Jr., Ph.D.	Chairman of the Board of Directors	March 12, 2004
/s/ ERNST-GUNTER AFTING, PH.D., M.D. Ernst-Gunter Afting, Ph.D., M.D.	Director	March 12, 2004
/s/ DANIEL L. KISNER, M.D. Daniel L. Kisner, M.D.	Director	March 12, 2004
/s/ RONALD M. LINDSAY, PH.D. Ronald M. Lindsay, Ph.D.	Director	March 12, 2004
/s/ JOHN E. LUCAS John E. Lucas	Director	March 12, 2004
/s/ KRIS VENKAT, PH.D. Kris Venkat, Ph.D.	Director	March 12, 2004

CERTIFICATIONS

I, Antonius Schuh, certify that:

1. I have reviewed this annual report on Form 10-K for the year ended December 31, 2003 of SEQUENOM, Inc.;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and we have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

   c) disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of this annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 12, 2004

/s/ ANTONIUS SCHUH

Antonius Schuh
Chief Executive Officer and President

I, Stephen L. Zaniboni, certify that:

1. I have reviewed this annual report on Form 10-K for the year ended December 31, 2003 of SEQUENOM, Inc.;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and we have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

   c) disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of this annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 12, 2004

/s/ STEPHEN L. ZANIBONI

Stephen L. Zaniboni
Chief Financial Officer

SEQUENOM, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Ernst & Young LLP, Independent Auditors

The Board of Directors and Stockholders
SEQUENOM, Inc.

We have audited the accompanying consolidated balance sheets of SEQUENOM, Inc. as of December 31, 2003 and 2002 and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2003. These financial statements 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 auditing standards generally accepted in the 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. at December 31, 2003 and 2002 and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2003, in conformity with accounting principles generally accepted in the United States.

/s/ ERNST & YOUNG LLP

San Diego, California
February 26, 2004

SEQUENOM, INC.

CONSOLIDATED BALANCE SHEETS

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

	December 31, 2003	December 31, 2002
Assets		
Current assets:		
Cash and cash equivalents	$ 35,601	$ 32,052
Short-term investments, available-for-sale	22,131	57,570
Restricted cash and investments	5,469	5,977
Accounts receivable, net	4,076	7,714
Inventories, net	10,569	7,710
Other current assets and prepaid expenses	1,142	3,320
Total current assets	78,988	114,343
Equipment and leasehold improvements, net	9,838	15,926
Intangible assets	11,338	14,590
Restricted cash and investments	4,253	6,951
Other assets	519	798
Total assets	$104,936	$152,608
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 5,256	$ 8,345
Accrued expenses	8,223	7,940
Accrued acquisition and integration costs	1,439	3,926
Deferred revenue	2,542	3,107
Current portion of long-term bank debt	5,621	4,942
Current portion of capital lease obligations	451	713
Total current liabilities	23,532	28,973
Deferred revenue, less current portion	34	733
Capital lease obligations, less current portion	57	508
Long-term debt, less current portion	5,624	9,234
Long-term deferred tax liability	3,674	4,911
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 at December 31, 2003 and 2002; issued and outstanding shares 39,565,342 and 39,395,262 at December 31, 2003 and 2002, respectively.	39	39
Additional paid-in capital	453,096	452,725
Deferred compensation related to stock options	–	(187)
Accumulated other comprehensive income	278	389
Accumulated deficit	(381,398)	(344,717)
Total stockholders' equity	72,015	108,249
Total liabilities and stockholders' equity	$104,936	$152,608

See accompanying notes.

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(Dollars in thousands, except per share information)

	Years ended December 31,		
	2003	2002	2001
Revenues:			
Products	$ 28,334	$ 24,868	$ 21,524
Services	1,596	5,646	8,942
Research	322	371	269
Total revenues	30,252	30,885	30,735
Costs and expenses:			
Cost of product revenue	15,759	13,277	12,338
Cost of service revenue	1,330	4,197	7,442
Research and development	25,425	33,451	29,327
Selling, general and administrative	23,125	28,464	24,167
Impairment of assets and goodwill	–	33,126	–
In-process research and development	–	3,668	24,920
Integration costs	–	3,000	–
Amortization of acquired intangibles	3,434	3,734	935
Amortization of deferred stock compensation ($135 and $52, $351 and $67, $789 and $150 and related to selling, general and administrative and research and development in 2003, 2002 and 2001, respectively)	187	418	939
Total costs and expenses	69,260	123,335	100,068
Loss from operations	(39,008)	(92,450)	(69,333)
Interest income	1,631	3,865	6,796
Interest expense	(680)	(408)	(343)
Impairment of equity investment	–	(1,000)	–
Other income (expense)	139	(63)	248
Loss before income tax and cumulative effect of accounting change	(37,918)	(90,056)	(62,632)
Deferred income tax benefit	1,237	1,309	–
Loss before cumulative effect of accounting change	(36,681)	(88,747)	(62,632)
Cumulative effect of accounting change	–	(116,947)	–
Net loss	$ (36,681)	$ (205,694)	$ (62,632)
Net loss per share, basic and diluted			
Before cumulative effect of accounting change	$ (0.93)	$ (2.32)	$ (2.25)
Cumulative effect of accounting change	–	$ (3.07)	–
Net loss per share, basic and diluted	$ (0.93)	$ (5.39)	$ (2.25)
Weighted average shares outstanding, basic and diluted	39,487	38,150	27,816

See accompanying notes.

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

($ in thousands)

	Common Stock		Additional	Notes Receivable	Deferred Compensation	Unrealized Gain (Loss) on available	Translation		Total
	Shares	Amount	Paid-In Capital	From Officers	Related to Stock Options	for sale securities	Adjustment Income (Loss)	Accumulated Deficit	Stockholders' Equity
Balance at December 31, 2000	24,442,092	$ 24	$223,140	$(599)	$ (1,551)	$ (662)	$ 977	$ (76,391)	$ 144,938
Net loss	–	–	–	–	–	–	–	(62,632)	(62,632)
Unrealized gain on available-for-sale securities	–	–	–	–	–	569	–	–	569
Translation adjustment	–	–	–	–	–	–	(447)	–	(447)
Comprehensive loss	–	–	–	–	–	–	–	–	(62,510)
Exercise of stock options	53,566	–	45	–	–	–	–	–	45
Purchases under Employee Stock Purchase Plan	50,422	–	651	–	–	–	–	–	651
Repurchase of unvested stock	(129,688)	–	(117)	–	–	–	–	–	(117)
Issuance of stock options to consultants	–	–	143	–	(143)	–	–	–	–
Amortization of deferred compensation	–	–	304	–	1,089	–	–	–	1,393
Issuance of common stock in connection with business combination	12,950,836	13	223,590	–	–	–	–	–	223,603
Forgiveness of notes receivable from officers	–	–	–	800	–	–	–	–	801
Issuance of notes receivable to officers related to exercise of stock options	–	–	–	(201)	–	–	–	–	(201)
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)	(29)	–	(19)
Translation adjustment	–	–	–	–	–	–	–	–	(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

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Continued)

($ in thousands)

	Common Stock		Additional	Notes Receivable	Deferred Compensation	Unrealized Gain (Loss) on available	Translation		Total
	Shares	Amount	Paid-In Capital	From Officers	Related to Stock Options	for sale securities	Adjustment Income (Loss)	Accumulated Deficit	Stockholders' Equity
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 gain 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

See accompanying notes.

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in thousands)

	Years ended December 31,		
	2003	2002	2001
Operating activities			
Net loss	$(36,681)	$(205,694)	$ (62,632)
Adjustments to reconcile net loss to net cash used in operating activities:			
Cumulative effect of accounting change	–	116,947	–
Stock-based compensation expense	33	–	143
In-process research and development	–	3,668	24,920
Amortization of deferred compensation	187	418	1,392
Depreciation and amortization	10,819	12,639	7,197
Impairment of goodwill and other assets	–	33,126	–
Integration charge	–	3,000	–
Non-cash forgiveness of loans	–	–	809
Loss on disposal of fixed assets	44	324	53
Deferred taxes	(1,237)	(1,309)	–
Impairment of equity investment	–	1,000	–
Changes in operating assets and liabilities:			
Accounts receivable	3,972	2,651	(5,780)
Inventories	(2,158)	1,271	(4,776)
Other current assets	2,219	758	6,274
Other assets	280	741	(856)
Accounts payable and accrued expenses	(6,041)	(9,598)	3,152
Deferred revenue	(1,390)	(4,726)	(2,155)
Other liabilities	263	(230)	(3,810)
Net cash used in operating activities	(29,690)	(45,014)	(36,069)
Investing activities			
Purchase of equipment, leasehold improvements, and intangible assets	(2,356)	(5,538)	(22,246)
Cash acquired from business combination	–	568	61,350
Restricted cash	3,297	(8,730)	(3,000)
Investment in investee	–	(1,000)	–
Purchases of marketable securities	(43,694)	(91,301)	(98,319)
Sales of marketable securities	22,532	41,547	50,953
Maturities of marketable securities	56,685	58,712	48,975
Net cash (used in) provided by investing activities	36,464	(5,742)	37,713

SEQUENOM, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)

(Dollars in thousands)

	Years ended December 31,		
	2003	2002	2001
Financing activities			
Repayment of long-term debt	(5,131)	(1,587)	–
Proceeds from long-term debt	2,200	12,219	–
Borrowings under capital lease obligations	–	–	1,275
Payments on capital lease obligations	(713)	(1,023)	(1,159)
Proceeds from exercise of warrants, stock options and Employee Stock Purchase Plan purchases	653	804	436
Loans granted to officers	–	–	(202)
Net cash provided by financing activities	(2,991)	10,413	350
Net increase (decrease) in cash and cash equivalents	3,783	(40,343)	1,994
Effect of exchange rate changes on cash and cash equivalents	(234)	709	(354)
Cash and cash equivalents at beginning of year	32,052	71,686	70,046
Cash and cash equivalents at end of year	$ 35,601	$ 32,052	$ 71,686
Supplemental schedule of non-cash investing and financing activities:			
Fair value of net assets acquired for stock, less cash	$ –	$ 4,465	$ 171,363
Supplemental disclosure of cash flow information:			
Interest paid	$ 680	$ 408	$ 343

See accompanying notes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of the Business

We are a leading genetics company organized into two distinct business units: SEQUENOM Genetic Systems and SEQUENOM Pharmaceuticals. The two business units combine to capitalize on our high performance DNA analysis platform, SNP assay portfolio, disease gene discovery programs and extensive DNA sample repository. SEQUENOM Genetic Systems is dedicated to the sales and support of our MassARRAY products and the continued expansion of platform applications. SEQUENOM Pharmaceuticals applies the power of human genetics to systematically identify disease-related genes that affect significant portions of the overall population. SEQUENOM Pharmaceuticals segment focuses on disease gene discovery, target identification, functional validation and ultimately diagnostic and therapeutic product development.

In August 2002, we completed our acquisition of Axiom Biotechnologies, Inc., a privately held company based in San Diego, CA. This acquisition should enable us to move our candidate disease genes forward through the drug discovery process by adding internal medicinal chemistry, assay and screening abilities, a library of well-characterized human cell lines, and intellectual property. The transaction was accounted for using the purchase method of accounting, and, accordingly, the results of operations have been included in the accompanying financial statements from the date of acquisition, which impacts the comparability of the financial information presented.

In September 2001, we completed the acquisition of Gemini Genomics plc, a public company based in the United Kingdom. Gemini Genomics was a clinical genomics company focused on the discovery and commercialization of novel gene-based drug discovery targets. Gemini had collected and analyzed information from a wide range of human population groups, including twins, disease-affected families, isolated or founder populations, and drug trial subjects. The transaction was accounted for using the purchase method of accounting and, accordingly, the results of operations have been included in the accompanying financial statements from the date of acquisition, which significantly affects the comparability of the financial information presented.

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 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 integra-

tion costs in accordance with Emerging Issues Task Force ("EITF") 95-3, "Recognition of Liabilities in Connection with a Purchase Business Combination." Amounts accrued totaled $27.0 million and as of December 31, 2003 approximately $1.4 million remained accrued. This amount represents the remaining balance of what we expect to incur related to our surplus facility lease costs. We do not know how long it will take us to sublease our remaining surplus space. The amount accrued at December 31, 2003 represents approximately 30 months of remaining lease payments, net of sublease income from existing subleased space, and if we do not sublease the remaining space by the end of that term we will incur additional expense of approximately $50,000 per month for 54 more months.

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

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 2003, slow-moving inventory reserves of $2.3 million were charged to cost of goods sold, and we held reserves of $1.9 million at December 31, 2003.

Software Costs

In accordance with SFAS No. 86, "Accounting for Costs of Computer Software to be Sold, Leased, or Otherwise Marketed", purchased software is capitalized at cost and amortized over the estimated useful life, generally two years. Our policy is to capitalize costs incurred in developing computer software once technological feasibility has been established. Generally, we consider technical feasibility to be demonstrated once the initial software product is complete. We amortize such costs over a maximum two year period. During 2003, approximately $400,000 of these costs were capitalized and approximately $100,000 was amortized to cost of product and service revenues for the Genetic Systems segment. At December 31, 2003, approximately $300,000 remained in intangible assets. Expenditures in 2002 and 2001 were classified as research and development expense as we had not begun to develop enhanced versions of our internally-used software for external customers. Competition with our customers may adversely affect our collaborations ability to successfully commercialize therapeutic or diagnostic products.

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 its 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 of the SEQUENOM Pharmaceuticals segment was estimated using a discounted cash flow methodology, and the charge related entirely to the SEQUENOM Pharmaceuticals segment and 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. We plan to continue to perform our reviews on an annual basis.

Under SFAS No. 142, goodwill impairment is deemed to exist if the net book value of a reporting unit exceeds its estimated fair value. No amortization on the goodwill arising as a result of our acquisition of Gemini Genomics in September 2001 was recognized during 2001 in accordance with the transition arrangements in SFAS No. 142.

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, 2003, 2002 and 2001. 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, 2003, we had invested in no single financial instrument that represented a significant concentration of credit risk. At December 31, 2003, no investment held had a significant long-term, non-temporary unrealized loss, as no individual investment had an unrealized loss in excess of $15,000.

The amounts reported below as market value were obtained from investment manager reports.

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

($ in thousands)	Amortized Cost	Market Value	Unrealized Gain/(Loss)
Obligations of U.S. Government Agencies	$ 3,503	$ 3,506	$ 3
U.S. corporate debt securities	17,672	17,649	(23)
International corporate debt securities	876	876	–
Certificates of deposit	100	100	–
Total short-term investments	$ 22,151	$ 22,131	$ (20)

Approximately 64%, 25% and 11% of these securities mature within one, two and three years of December 31, 2003, respectively.

At December 31, 2002, short-term investments consisted of the following:

($ in thousands)	Amortized Cost	Market Value	Unrealized Gain/(Loss)
Obligations of U.S. Government Agencies	$ 498	$ 500	$ 2
Corporate debt securities	53,188	53,079	(109)
Certificates of deposit	3,578	3,578	–
Municipal bonds	414	413	(1)
Total short-term investments	$ 57,678	$ 57,570	$ (108)

Restricted Cash

Restricted cash of $9.7 million as of December 31, 2003 is held in term deposits with restrictions of withdrawal, in support of certain borrowing agreements and a stand-by letter of credit. Restricted cash totaled $12.9 million at December 31, 2002.

Concentration of Risks

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

($ in thousands)

Region	December 31, 2003	Percent of receivable balance	December 31, 2002	Percent of receivable balance
Europe	$ 663	16%	$3,517	46%
Asia	1,658	41%	1,083	14%
North America	1,755	43%	3,114	40%
Total	$4,076	100%	$7,714	100%

Approximately $1.6 million and $5.6 million, or 5% and 18% of the our revenues during the years ended December 31, 2003 and 2002, respectively, were from genetic validation services provided to pharmaceutical companies and universities. We do not intend to compete for these low-margin validation studies in future periods. Our Asia-based major distributors represented $6.2 million and $5.1 million, or 22% and 21% of our total product revenues during the year ended December 31, 2003 and 2002, respectively. If the relationship with these distributors were to change, there could be a material adverse impact upon SEQUENOM Genetic Systems segment.

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:

($ in thousands)

	December 31,	
	2003	2002
Raw materials	$ 8,159	$4,299
Work in process	126	141
Finished goods	2,284	3,270
Total	$10,569	$7,710

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:

($ in thousands)

	December 31,	
	2003	2002
Laboratory equipment	21,189	22,590
Leasehold improvements	4,322	5,514
Office furniture and equipment	6,123	6,568
	31,634	34,672
Less accumulated depreciation and amortization	(21,796)	(18,746)
	$ 9,838	$15,926

Depreciation expense for the years ended December 31, 2003, 2002 and 2001 was $6.7 million, $8.0 million, and $6.7 million respectively.

Intangible Assets

Intangible assets consisted of the following:

($ in thousands)

		December 31, 2003		December 31, 2002	
	Weighted Average Life	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Clinical data collections	5	$16,110	$(7,250)	$16,110	$(4,028)
Purchased patent rights and licenses	5	4,895	(2,417)	3,589	(1,081)
Total		$21,005	$(9,667)	$19,699	$(5,109)

Intangible amortization for the year ended December 31, 2003 was $4.0 million. Estimated aggregate amortization expense for the next five years is as follows:

Year ended December 31,	$ in millions
2004	$ 4.1
2005	3.9
2006	2.9
2007	0.3
2008	0.1
	$11.3

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 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 in fact 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, $7.0 million relating to SEQUENOM Pharmaceuticals and the remaining $1.1 million relating to SEQUENOM Genetic Systems. 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.

Goodwill

Goodwill, which was primarily from the Company's 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", revenues are recognized, when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed and determinable and collectibility is reasonably assured. We consider EITF 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables", and for MassARRAY system sales, the arrangement consideration is allocated among the separate units of accounting based on their relative fair values. The separate units of accounting are typically the system and software itself and maintenance contracts sold at the time of the system sale. Revenue is deferred for fees received before earned. Revenues from sales of the MassARRAY system and consumables are

recognized generally upon shipment and transfer of title to the customer. 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, 2003, 2002 and 2001.

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 amortizes 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 2003, 2002 or 2001.

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,		
	2003	2002	2001
	($ in thousands, except per share information)		
Pro forma net loss	$ (41,463)	$(212,843)	$ (66,998)
Net loss as reported	$ (36,681)	$(205,694)	$ (62,632)
Pro forma net loss per share, basic and diluted	$ (1.05)	$ (5.58)	$ (2.41)
Net loss per share, basic and diluted, as reported	$ (0.93)	$ (5.39)	$ (2.25)

The fair value of stock-based awards was estimated at the date of grant as follows:

	2003	2002	2001
Model	Black-Scholes	Black-Scholes	Black-Scholes
Risk free interest rates	4%	4%	5%
Volatility	83%	99%	90%
Dividend yield	0%	0%	0%
Weighted average life	4	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.

Comprehensive Income (Loss)

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

Net Loss Per Share

In accordance with SFAS No. 128, "Earnings Per Share", basic net income (loss) per share is computed by dividing the net income (loss) for the period by the weighted average number of common shares outstanding during the period. Diluted net income (loss) per share is computed by dividing the net income (loss) for the period by the weighted average number of common and common equivalent shares outstanding during the period. Common equivalent shares are comprised of incremental common shares issuable upon the exercise of stock options and warrants total 2,804,783, 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 May 2003, the Financial Accounting Standards Board ("FASB") issued SFAS No. 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity". SFAS No. 150 affects the issuer's accounting for three types of freestanding financial instruments; (a) mandatorily redeemable shares which the issuing company is obligated to buy back in exchange for cash or other assets, (b) put options and forward purchase contracts that do or may require the issuer to buy back some of its shares in exchange for cash or other assets, and (c) obligations that can be settled with shares, the monetary value of which is fixed, ties solely or predominantly to a variable such as a market index, or varies inversely with the value of the issuer's shares. SFAS No. 150 also requires disclosures about alternative ways of settling the instruments and the capital structure of entities. SFAS No. 150 is effective for all financial instruments entered into or modified after May 31, 2003 and for all periods beginning after June 15, 2003 except for mandatorily redeemable financial instruments of nonpublic entities which are subject to the provisions of SFAS No. 150 for the first fiscal period beginning after December 15, 2003. The adoption of SFAS No. 150 has not had and we do not anticipate will have a material impact on our consolidated financial statements.

In November 2002, the FASB issued FASB Interpretation No. 45 ("FIN 45"), Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others. FIN 45 requires a liability to be recorded in the guarantor's balance sheet upon issuance of a guarantee. In addition, FIN 45 requires disclosures about the guarantees that an entity has issued, including a reconciliation of changes in the entity's product warranty liabilities. The initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. The disclosure requirements of FIN 45 are effective for financial statements ending after December 15, 2002. The adoption of FIN 45 has not had a material impact on our consolidated financial statements.

In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51." FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. In December 2003, the FASB issued FIN 46R, a revision to FIN 46. FIN 46R provides a broad deferral of the latest date by which all public entities must apply FIN 46 to certain variable interest entities to the first reporting period ending after March 15, 2004. We do not expect the adoption of FIN 46 to have a material impact upon our financial position, cash flows or results of operations.

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. During 2001, we operated in one business segment, discovery genetics. We integrated our historical genetic discovery business with Gemini Genomics during 2002 and as a result report financial results and the progress of our business in two distinct business units: SEQUENOM Genetic Systems and SEQUENOM Pharmaceuticals for the years ended December 31, 2003 and 2002.

The Genetic Systems unit is dedicated to the sales management and support of our MassARRAY hardware, consumable and software product offerings and the continual expansion of platform applications. The Pharmaceuticals unit applies the power of human genetics to systematically identify

disease-related genes. The unit focuses on disease gene discovery, target identification, functional validation and diagnostic and therapeutic product development.

The results of the segments of the business are as follows:

	Year Ended					
	December 31, 2003			December 31, 2002		
($ in thousands)	SEQUENOM Genetic Systems	SEQUENOM Pharmaceuticals	Total	SEQUENOM Genetic Systems	SEQUENOM Pharmaceuticals	Total
Product sales	$ 28,164	$ 170	$ 28,334	$ 24,762	$ 106	$ 24,868
Validation services	–	1,596	1,596	–	5,646	5,646
Research	–	322	322	55	316	371
Total revenues	28,164	2,088	30,252	24,817	6,068	30,885
Cost of product and service revenue	15,697	1,392	17,089	13,201	4,273	17,474
Research and development	10,901	14,524	25,425	16,234	17,217	33,451
Selling, general and administrative	16,609	6,516	23,125	21,875	6,589	28,464
Impairment of assets and goodwill	–	–	–	1,134	31,992	33,126
In-process research and development	–	–	–	–	3,668	3,668
Integration costs	–	–	–	–	3,000	3,000
Amortization of acquired intangibles	–	3,434	3,434	–	3,734	3,734
Amortization of deferred stock compensation	140	47	187	334	84	418
Total costs and expenses	43,347	25,913	69,260	52,778	70,557	123,335
Loss from operations	$(15,183)	$(23,825)	$(39,008)	$(27,961)	$(64,489)	$(92,450)

Segment financial information for the year ended December 31, 2002 has been reclassified between the segments to reflect our view of the business segment allocation. Genetic service revenue of approximately $5.5 million and associated cost of product and service revenue of approximately $3.8 allocated to SEQUENOM Genetic Systems in the year ended December 31, 2002, have been reallocated to SEQUENOM Pharmaceuticals to conform with current year presentation in the segmental information provided above.

Prior to 2002, we operated in one business segment making it impracticable to provide separate financial information for SEQUENOM Genetic Systems and SEQUENOM Pharmaceuticals.

We do not currently segregate assets by segment because a significant portion of our total assets are assets commonly used by both segments and cash, cash equivalents and marketable securities. We are evaluating the feasibility and usefulness of assigning our other assets to SEQUENOM Genetic Systems and SEQUENOM Pharmaceuticals segments and may report assets by segment in the future.

4. Business Combinations

In August 2002, we completed the acquisition of Axiom Biotechnologies, Inc., a privately-held company based in San Diego, California. Under the terms of the agreement, holders of Axiom Biotechnologies stock received 0.2093 of a share of newly issued SEQUENOM common stock in exchange for each share of capital stock of Axiom. As a result of this transaction, we issued approximately 1.7 million shares of its 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.

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

The intangible assets are being amortized over their estimated useful lives of five years and are categorized as patent rights and licenses. 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.

The acquisition is considered immaterial to our revenues and expenses during the year ending December 31, 2002, and accordingly no pro-forma information is provided. Axiom's financial results are incorporated into our consolidated financial information from September 1, 2002.

In September 2001, we completed the acquisition of Gemini Genomics, a public company based in the United Kingdom. Under the terms of the agreement, holders of Gemini Genomics ordinary shares received 0.2000 of a share of newly issued SEQUENOM common stock in exchange for each ordinary share of Gemini Genomics. Holders of Gemini Genomics American Depository Shares (ADSs) received 0.4000 of a share of newly issued SEQUENOM common stock in exchange for each Gemini Genomics ADS. As a result of this transaction, SEQUENOM issued approximately 13.0 million shares and assumed outstanding options and warrants, equivalent to approximately 1.2 million additional shares. The transaction was accounted for using the purchase method of accounting. We determined the purchase price of Gemini Genomics, which was acquired in September 2001, in accordance with EITF 99-12 which assigns a price to the shares issued based on the market price at the time of the announcement of the acquisition, which resulted in a purchase price of approximately $232.7 million, including transaction and integration costs of approximately $23.0 million. Had we valued the acquisition at the date that the deal was consummated in late September, the purchase price would have been approximately $120 million.

In connection with this transaction, we allocated the purchase price in accordance with Accounting Principles Board Opinion No. 16.

The total purchase price of $232.7 million was allocated as follows ($ in millions):

Net tangible assets acquired	$ 53.8
In-process research and development	24.9
Intangible assets	18.7
Long term deferred tax liability	(6.2)
Goodwill	141.5
	$232.7

The intangible assets are being amortized over their estimated useful lives of five years and are categorized as clinical data collections. The goodwill was not amortized in accordance with SFAS No. 142, but was reviewed upon our adoption of SFAS No.142 on January 1, 2002 and we recognized a one-time, non-cash charge of $116.9 million to reduce the carrying value of the goodwill. A further annual review

of the carrying value of goodwill, carried out in the fourth quarter of 2002, determined that the goodwill associated with SEQUENOM Pharmaceuticals was fully impaired, and was included in the goodwill impairment charge taken in the year ended December 31, 2002. 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 this time the technology has no future alternative uses and accordingly, the value assigned to in-process research and development was immediately charged to the statement of operations for the year ended December 31, 2001.

5. Acquisition and Integration Costs

As of December 31, 2003 we had $1.4 million remaining in accrued acquisition costs, relating to the acquisitions of Gemini Genomics in 2001 and Axiom Biotechnologies in 2002. As of December 31, 2003, the remaining combined acquisition liability of approximately $1.4 million relates to facility exit costs. We do not know how long it will take us to sublease our remaining surplus space. We received sub-lease income, which we set against lease expense, of $0.3, $0.2, and $0.1 million for the years ended December 31, 2003, 2002 and 2001, respectively. The remaining amount accrued at December 31, 2003 represents approximately 30 months of remaining lease payments, net of sublease income from existing subleased space, and if we do not sublease the remaining space by the end of that term we will incur additional expense of approximately $50,000 per month for 54 more months. An integration charge of $3.0 million relating to the closure of the Uppsala, Sweden operations was recorded in 2002 and consisted primarily of book value of the assets at time of closure which was released against the actual closure costs incurred in 2002.

The activity in the years ended December 31, 2003 and 2002, respectively, was as follows ($ in millions):

	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

	Balance at December 31, 2001	Additions to accrual in 2002 related to Axiom Biotechnologies acquisition	Amount charged to expense, related to closure of SEQUENOM AB	Deductions	Balance at December 31, 2002
Direct costs of the acquisition	$ 0.6	$ 0.3	$ –	$(0.7)	$0.2
Costs to close facilities and exit lease commitments	5.4	0.2	3.0	(5.3)	3.3
Severance, retention and related employee charges	0.5	0.4	–	(0.6)	0.3
Contract termination costs	–	0.1	–	–	0.1
	$ 6.5	$ 1.0	$ 3.0	$(6.6)	$3.9

Substantially all of the remaining $1.4 million balance at December 31, 2003 relates to the acquisition of Gemini Genomics.

6. Long-Term Debt

We have a credit agreement with a financial institution that provides for borrowings of up to $15.1 million. Any borrowings under the agreement will be secured by cash and cash equivalents and will bear interest at the institution's reference rate less 0.5%, or 2.62% and 3.42% at December 31, 2003 and 2002, respectively. As of December 31, 2003, and 2002, respectively, $8.6 million and $10.8 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 provides for borrowings up to $4.0 million, which was fully utilized by June 2003. Any borrowings under the agreement will be secured over identified tangible fixed assets of ours, and will bear interest at a blended rate of 9%. As of December 31, 2003 and 2002, respectively, $2.7 and $3.4 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 December 31, 2003, 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 $2.0 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
2004	$ 5,621
2005	4,715
2006	909
	$11,245

7. Commitments and Contingencies

Building Leases

We lease facilities in the United States, Germany, and the United Kingdom. In total, the Company leases space in eight buildings under leases that expire from January 2004 to December 2015. Total rent expense under these leases was approximately $3.9 million, $3.8 million, and $4.3 million in 2003, 2002, and 2001, 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 will purchase the equipment that we will lease subject to quarterly payments for 14 quarters. At December 31, 2003, we had borrowed $1.9 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,	
	2003	2002
	($ in thousands)	
Laboratory equipment	$3,295	$ 3,616
Leasehold improvements	–	34
Office furniture and equipment	168	217
	3,463	3,867
Less accumulated amortization	(3,257)	(3,173)
	$ 206	$ 694

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, 2003:

Year Ending December 31,	Capital Leases	Operating Leases
	($ in thousands)	
2004	$ 473	$ 4,478
2005	59	4,622
2006	–	4,551
2007	–	4,668
2008	–	4,750
Thereafter	–	32,072
	532	$55,141
Less amount representing interest	(24)	
Present value of minimum lease payments	508	
Less current portion	(57)	
Long-term capital lease obligations	$ 451	

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 $0.9 million.

Collaboration, Development, and Licensing Agreements

We enter into various arrangements with corporate partners, licensors, licensees, vendors and others, as a part of our strategy for the research, development, commercialization and distribution of some of our products. The success of these agreements is dependent upon the parties' performance of their obligations as expected. It is uncertain if any revenue will be derived from any of the arrangements.

We entered into various license agreements from 1996 onwards 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 year ended December 31, 2003, the amount of royalties incurred in connection primarily with SEQUENOM Genetic Systems commercial product sales was $0.9 million. No significant royalty amounts were incurred in the years ended December 31, 2002 or 2001.

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 (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, and we await the preparation by the plaintiffs of a settlement agreement. In September 2003, in connection with the possible settlement, our officers and directors who had entered into tolling agreements with plaintiffs (described above) agreed to extend those agreements so that they would not expire prior to any settlement being finalized. Although we have approved this settlement proposal in principle, it remains subject to a number of procedural conditions, as well as formal approval by the Court. 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.

8. Related Party Transactions

We had the following transactions with parties related to certain of our Board members, all of which were on the same terms as similar transactions with unconnected parties:

- Provid Pharmaceuticals. We invested $1 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. Dr. Kris Venkat is a member of our Board and also sits on the Board of Provid Pharmaceuticals. Dr Charles Cantor is a member of Provid's SAB.

- GSF. Dr. Ernst-Gunter Afting was a member of our Board and the Managing Director of GSF in Germany. During the years ended December 31, 2003, 2002, and 2001, we sold MassARRAY hardware and associated products totaling $0.9 million, $0.3 million and $0.5 million to GSF.

- Boston University. Dr. Charles Cantor is 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, $0.2 million, and $0.2 million, and they are a customer for MassARRAY hardware and consumables, totaling $0.3 million, $0.2 million and approximately $75,000 in the years ended December 31, 2003, 2002 and 2001 respectively. We also have loaned Boston University a MassARRAY system for use in their research programs.

- Samsung. Dr Charles Cantor is a consultant with a wholly-owned technology subsidiary of the Samsung group. We purchase some components of our MassARRAY systems and consumables from Samsung, and sell our products to them. Sales to Samsung group companies were $2.4 million, $2.7 million and $0.7 million and purchases were $2.7 million, $1.3 million and $0.0 million for the years ended December 31, 2003, 2002 and 2001, respectively.

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

Related party	Receivables	Payables
Provid	$ –	$ –
GSF	48	–
Boston University	24	15
Samsung	5	382
Total	$ 77	$397

9. Stockholders' Equity

Stockholder Rights Plan

On October 19, 2001, the Board of Directors of SEQUENOM, Inc. approved the adoption of a Stockholder Rights Plan (the "Plan"). Terms of the Plan provide for a dividend distribution of one preferred share purchase right (a "Right") for each outstanding share of common stock, par value $.001 per share (the "Common Shares"), of the Company. The dividend distribution of one preferred share purchase right was paid on November 5, 2001 (the "Record Date") to the stockholders of record on that date. Each Right entitles the registered holder to purchase, under certain circumstances, from us one one-hundredth of a share of Series A Junior Participating Preferred Stock, par value $.001 per share (the "Preferred Shares"), at a price of $85 per one one-hundredth of a Preferred Share (the "Purchase Price"), subject to adjustment. Each one hundredth of a Preferred Share has designations and powers, preferences and rights, and the qualifications, limitations and restrictions which make its value approximately equal to the value of a Common Share.

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, 2001 through December 31, 2003.

Outstanding	Shares Subject to Options	Weighted-Average Exercise Price per Share
Outstanding at December 31, 2000	1,360,952	$24.20
Options assumed in connection with acquisition of Gemini Genomics	1,194,110	17.26
Granted	1,091,700	12.78
Canceled	(1,446,215)	29.39
Exercised	(53,566)	1.67
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

In connection with the acquisition of Gemini Genomics in 2001, the outstanding options to purchase Gemini ordinary and ADS shares at varying prices were assumed by us for options to purchase SEQUENOM Common Stock at a weighted average exercise price of $17.26 per share. All options were fully vested upon completion of the transaction.

At December 31, 2003, 735,404 shares were available for future option grants and 6,188,302 shares of common stock were reserved for issuance upon exercise of options.

The weighted average grant-date fair value of options granted in 2003, 2002 and 2001 was $1.84, $3.39, and $9.97, respectively.

The following table summarizes information about options outstanding at December 31, 2003:

	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	2,120,111	8.8	$ 2.34	568,629	$ 2.15
$3.70 - $ 4.89	2,256,711	7.5	$ 4.25	1,409,860	$ 4.46
$6.38 - $35.00	1,076,076	7.3	$16.58	769,211	$19.67
$0.05 - $35.00	5,452,898	8.0	$ 5.94	2,747,700	$ 8.24

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, 2003, we had reserved 992,340 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, 2003 and 2002, respectively, 103,475 and 101,754 shares were purchased by employees at an average price of $1.38 and $3.50 per share, respectively. At December 31, 2003, there were 36,641 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, expires in December, 2011 and remains outstanding at December 31, 2003.

In connection with the acquisition of Gemini Genomics, the outstanding warrant to purchase 40,000 Gemini ordinary shares at an exercise price of £0.20 was adjusted to be exercisable for 8,000 shares of SEQUENOM Common Stock at an exercise price of $0.35 per share. This warrant was issued by Gemini in connection with a capital lease facility and expired in February 2003.

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 IPO. These warrants expire in May 2007. As of December 31, 2003, 35,083 of these warrants remain outstanding.

Deferred Compensation

No deferred compensation was recorded during the years ended December 31, 2003 and 2002. We recorded deferred compensation of $1.7 million in the year ended December 31, 2000, in connection with the grants of certain stock options to employees prior to our initial public offering in January 2000. Amortization of deferred compensation totaled approximately $0.2 million, $0.4 million, and $0.9 million during the years ended December 31, 2003, 2002 and 2001, respectively.

10. Income Taxes

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

	December 31,		
	2003	2002	2001
		($ in thousands)	
Tax at statutory rate	$(13,271)	$(71,908)	$(21,921)
State taxes, net of Federal benefit	(2,179)	(8,437)	(1,767)
Change in valuation allowance	14,701	31,321	15,547
Goodwill write-off	–	49,685	–
In-Process R&D write-off	–	–	8,722
Other	(488)	(1,970)	(581)
	$ (1,237)	$ (1,309)	$ –

The 2003 and 2002 income tax benefit of $1.2 and $1.3 million is comprised of foreign deferred taxes.

Deferred income taxes reflect the net effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets and liabilities are shown below. A valuation allowance of $100.5 million has been recorded, as realization of such assets is uncertain.

	December 31,	
	2003	2002
	($ in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 79,869	$69,035
Research and development credits	8,372	6,729
Capitalized research expenses	6,177	5,226
Capital loss carryforward	1,003	–
Other, net	5,096	4,748
Total deferred tax assets	100,517	85,738
Deferred tax liabilities:		
Intangible Assets	(3,674)	(4,911)
Valuation allowance	(100,517)	(85,738)
Net deferred tax assets (liabilities)	$ (3,674)	$ (4,911)

At December 31, 2003, we have federal and state tax net operating loss carryforwards of approximately $175.6 million and $64.1 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 $455,000 of the state tax loss carryforwards will expire in 2004 and the state tax loss carry-forwards will continue to expire in 2005 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 $10.1 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 $5.6 million and $5.4 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.

11. Savings and Pension Plans

We have a 401(k) savings plan covering most United States employees. In the United Kingdom we make contributions to defined contribution pension plans. Under these plans, individual employees may make contributions to the plan, which can be matched by the Company in an amount determined by the Board of Directors or as determined by local statutes. We made matching contributions totaling approximately $0.2 million, $0.3 million and $0.3 million in 2003, 2002 and 2001, respectively.

12. Geographic Information

We have wholly-owned subsidiaries located in Germany and the United Kingdom and have customer and vendor relationships worldwide. The following table presents information about us by geographic area. There were no material amounts of transfers between geographic areas. Included in the consolidated balance sheets and consolidated statements of operations are the following domestic and foreign components at December 31, 2003, 2002, and 2001:

	December, 31,		
	2003	2002	2001
Current assets:			
United States	$ 70,807	$ 105,090	$ 98,436
Europe	6,524	8,170	60,830
Asia	1,657	1,083	4,299
	$ 78,988	$ 114,343	$163,565
Property, equipment and leasehold improvements, net:			
United States	$ 9,065	$ 14,842	$ 23,479
Europe	491	624	1,620
Asia	282	460	–
	$ 9,838	$ 15,926	$ 25,099
Other assets:			
United States	$ 16,110	$ 22,339	$163,815
Europe	–	–	3,902
	$ 16,110	$ 22,339	$ 167,717
Total assets:			
United States	$ 95,982	$ 142,271	$285,730
Europe	7,015	8,794	66,352
Asia	1,939	1,543	4,299
	$104,936	$ 152,608	$356,381
Revenues:			
United States	$ 14,586	$ 18,599	$ 21,635
Europe	8,225	6,447	4,520
Asia	7,441	5,839	4,580
	$ 30,252	$ 30,885	$ 30,735
Net loss:			
United States	$ (28,889)	$(196,697)	$ (46,024)
Europe	(3,732)	(3,396)	(10,859)
Asia	(4,060)	(5,601)	(5,749)
	$ (36,681)	$(205,694)	$ (62,632)

13. Selected Quarterly Financial Data (unaudited)

(Dollars in thousands, except per share information)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
2003					
Net sales	7,178	7,611	7,142	7,999	29,930
Gross profit	3,212	2,990	3,289	3,350	12,841
Cumulative effect of accounting change	–	–	–	–	–
Net income (loss)	(8,545)	(9,340)	(8,814)	(9,982)	(36,681)
Net income (loss) per share, basic and fully diluted	$ (.22)	$ (.24)	$ (.22)	$ (.25)	$ (.93)
Shares used in calculated per share amounts, historical, basic and fully diluted	39,431	39,449	39,532	39,534	39,487
2002					
Net sales	$ 8,559	$ 7,617	$ 6,829	$ 7,509	$ 30,514
Gross profit	3,767	3,301	2,727	3,245	13,040
Net income (loss) before cumulative effect of accounting change	(10,952)	(15,002)	(16,992)	(45,801)	(88,747)
Cumulative effect of accounting change	(116,947)	–	–	–	(116,947)
Net income (loss)	(127,899)	(15,002)	(16,992)	(45,801)	(205,694)
Net income (loss) per share, basic and fully diluted					
Net loss before cumulative effect of accounting change	$ (0.29)	$ (0.40)	$ (0.45)	$ (1.16)	$ (2.32)
Cumulative effect of accounting change	$ (3.12)	$ –	$ –	$ –	$ (3.07)
Net loss per share, basic and diluted	$ (3.41)	$ (0.40)	$ (0.45)	$ (1.16)	$ (5.39)
Shares used in calculated per share amounts, historical, basic and fully diluted	37,456	37,527	38,197	39,396	38,150

Corporate Information

EXECUTIVE MANAGEMENT

Toni Schuh, Ph.D.
President & Chief Executive Officer

Andreas Braun, M.D., Ph.D.
Chief Medical Officer

Charles R. Cantor, Ph.D.
Chief Scientific Officer

Stephen L. Zaniboni
Chief Financial Officer

Jay Lichter, Ph.D.
Executive Vice President
of Business Development

Richard Macdonald, Ph.D.
Executive Vice President
of Bioinformatics & Information
Technology

John Nestor, Jr., Ph.D.
Executive Vice President
of Drug Discovery

Michael Terry
Executive Vice President
of Sales & Marketing

Elizabeth Anderson
Vice President of Finance

Kimberly Ellstrom
Vice President of Human Resources

Robin Jackman, Ph.D.
Vice President
of Corporate Development

Clarke Neumann
Vice President & General Counsel

Karsten Schmidt, Ph.D.
Vice President of Operations

INVESTOR RELATIONS CONTACT

Linda Rawson
T: 858 202 9000
lrawson@sequenom.com

BOARD OF DIRECTORS

Harry F. Hixson, Jr., Ph.D.
Chairman, SEQUENOM, Inc. and
Elitra Pharmaceuticals

Ernst Günter Afting, M.D., Ph.D.
President, GSF – National
Research Center for Environment
& Health, Germany

Charles R. Cantor, Ph.D.
Chief Scientific Officer,
SEQUENOM, Inc.

Daniel L. Kisner, M.D.
Chairman, Caliper Life Sciences

Ronald M. Lindsay, Ph.D.
Former Chief Scientific Officer,
diaDexus, Inc.

John Lucas
Healthcare Industry Advisor

Toni Schuh, Ph.D.
President & Chief Executive Officer,
SEQUENOM, Inc.

Kris Venkat, Ph.D.
President & Chief Executive
Officer, Sundari Enterprises, Inc.

FORM 10-K

A copy of the annual report to the Securities and Exchange Commission on Form 10-K may be obtained without charge by contacting SEQUENOM's Investor Relations department. Quarterly earnings releases, corporate news releases and certain SEC filings are available at www.sequenom.com.

ANNUAL MEETING

The annual meeting of stockholders will be held on May 14, 2004 at 9:00AM PDT
SEQUENOM, Inc.
3595 John Hopkins Court
San Diego, CA 92121

HEADQUARTERS

3595 John Hopkins Court
San Diego, CA 92121
T: 858 202 9000
F: 858 202 9001
www.sequenom.com

U.S. EAST COAST OFFICE

179 Sidney Street
Cambridge, MA 02139
T: 617 868 4850
F: 617 868 4975

EUROPEAN OFFICES

Mendelssohnstrasse 15D
22761 Hamburg
Germany
T: 49 (0) 40 899 676 0
F: 49 (0) 40 899 676 10

Trinity House
Cowley Road
Cambridge, CB4 OWZ
United Kingdom

PACIFIC RIM OFFICE

300 Herston Road
Herston, QLD 4006
Australia
T: 61 (07) 3845 3683
F: 61 (07) 3845 3506

REGISTRAR & TRANSFER AGENT

American Stock
Transfer & Trust Company
40 Wall Street
New York, NY 10005
T: 212 936 5100

INDEPENDENT AUDITORS

Ernst & Young, LLP

LEGAL COUNSEL

Cooley Godward LLP,
San Diego

DESIGN: ALDEN, SAN DIEGO, CA

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