Molecular Devices Corp

Accelerate drug discovery; accelerate our growth.

Annual Report 2004

Molecular Devices Corporation (Nasdaq: MDCC) is a leading supplier of high-performance bioanalytical measurement systems that accelerate and improve drug discovery and other life sciences research. Our systems and consumables enable pharmaceutical and biotechnology companies to leverage advances in genomics, proteomics, and parallel chemistry by automating the high-throughput and cost-effective identification and evaluation of drug candidates. Our solutions are based on our advanced core technologies that integrate our expertise in engineering, chemistry, and molecular and cell biology. We enable our customers to improve research productivity and effectiveness, which ultimately accelerates the complex process of discovering and developing new drugs. For more information go to www.moleculardevices.com.

When it comes to the challenge of drug discovery—the risky, time-consuming hunt for an agent that can reverse a disease—faster is definitely better.

That's why the word accelerate is an explicit part of our purpose at Molecular Devices: to provide innovative solutions to accelerate the leading edge of life sciences research.

FLIPR^{TETRA} In 2004, Molecular Devices introduced the fourth generation of its FLIPR® family of high-throughput screening solutions for drug discovery. FLIPR^{TETRA} can handle microplates holding 1,536 samples and an expanded variety of testing options in a robust, state-of-the-art platform.

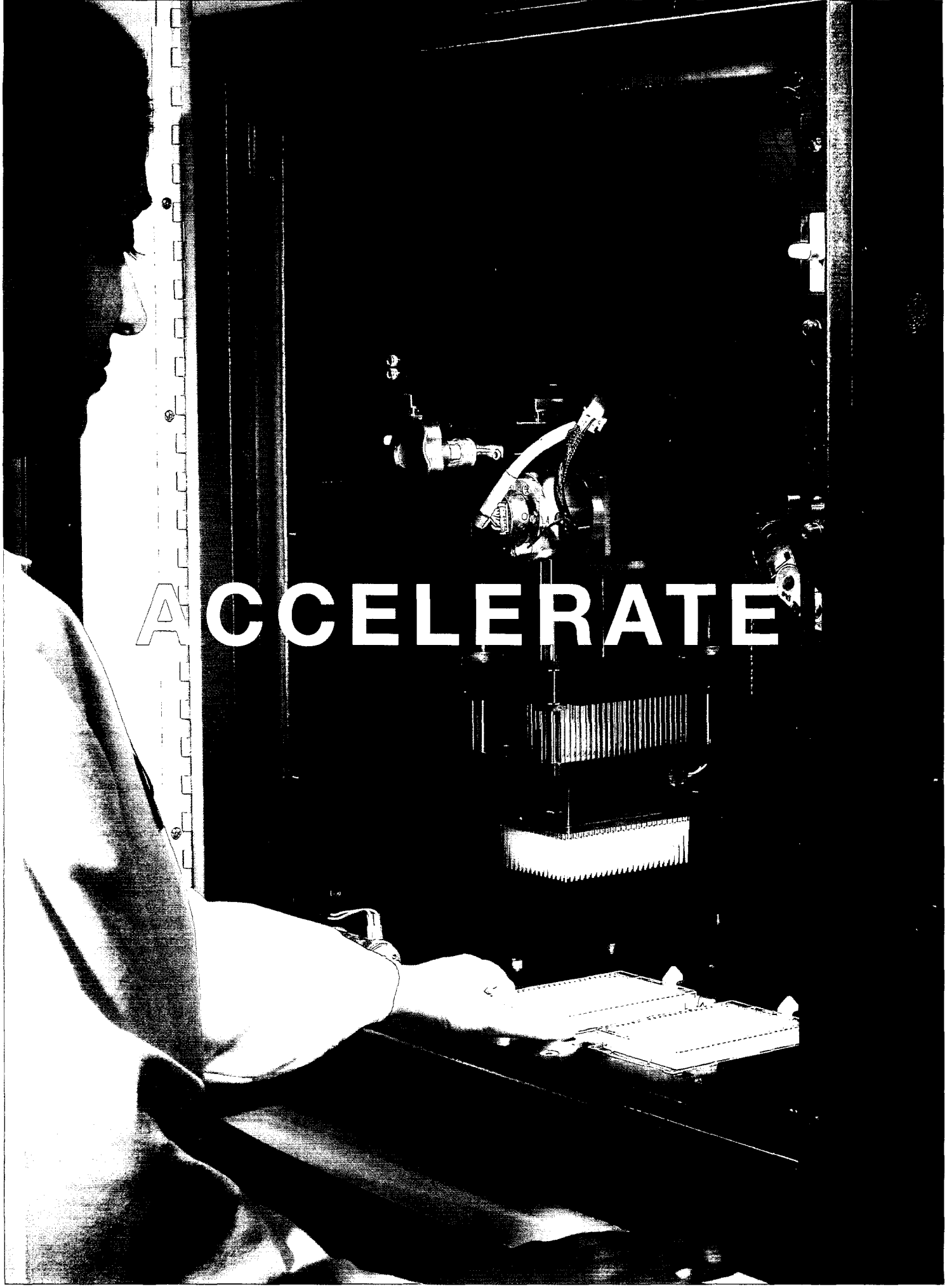
To our stockholders:

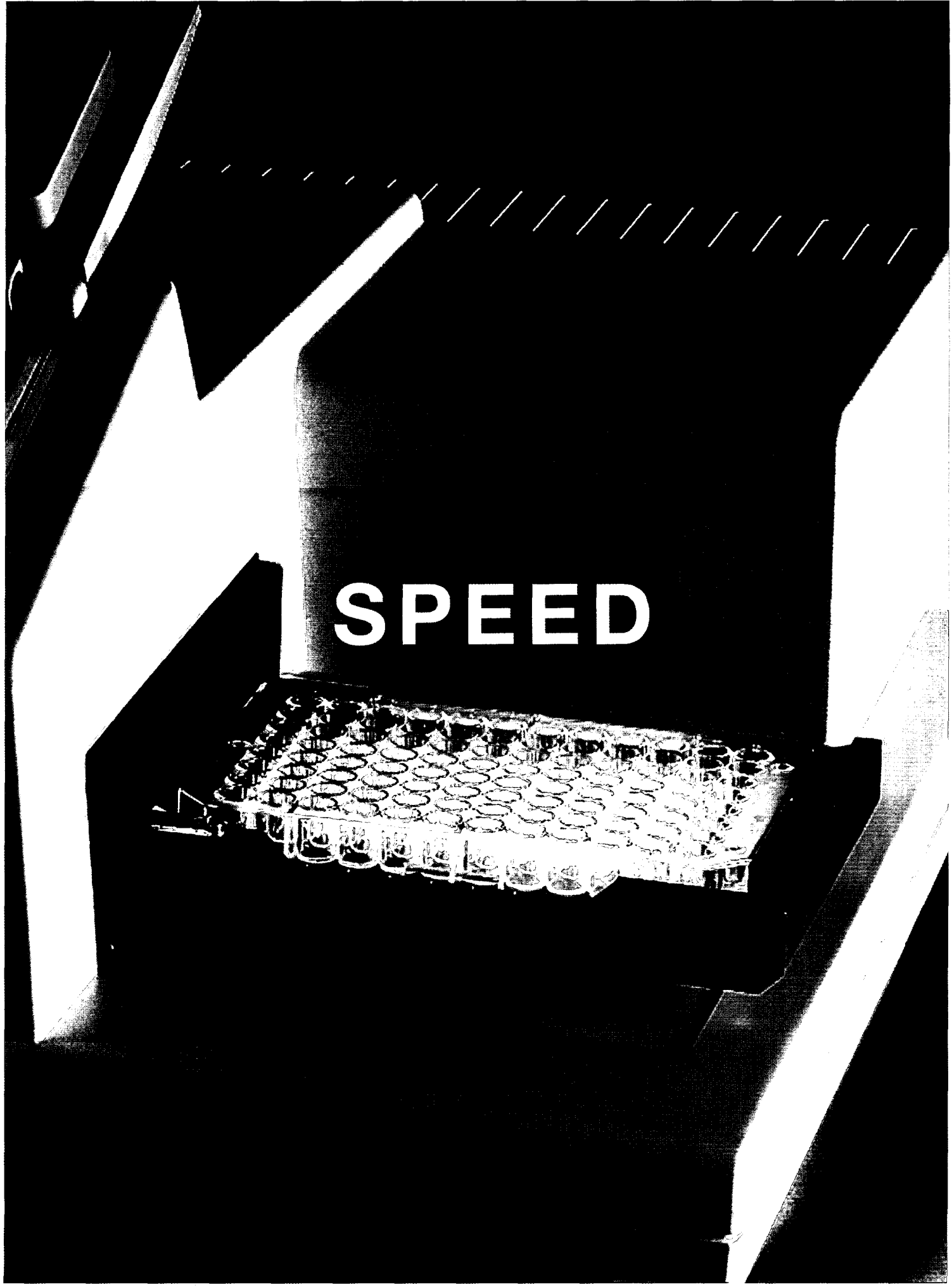
A year of record-breaking financial results is the most visible embodiment of our excellent fiscal 2004 performance: we reported revenues of $148.5 million, an increase of 29% from the $115.6 million reported in fiscal 2003. These improved results reflected a somewhat more robust climate for capital spending on the part of our customers, pharmaceutical and biotechnology companies, along with life sciences researchers. But they also reflect significant advances in our ability to add value to customers and tap new opportunities. Fiscal 2004 will stand out as a breakthrough year on several fronts: powerful new products, an acquisition with a strong strategic fit, and an even broader and deeper capability to market our solutions globally. It was, in short, a great year for Molecular Devices, and we believe that the progress we made across many aspects of our business should generate continued opportunities for growth in 2005 and beyond.

As a theme for this year's report, we chose a word that is integral to our business: accelerate. In a very literal sense, that verb encompasses one of the most important value propositions we offer to our customers, and it's a key component of our purpose: accelerating the leading edge of life sciences research. Our customers are engaged in a marathon: the time-, labor-, and capital-intensive search for new pharmaceuticals. We accelerate the pace of that race in two important ways: by using sophisticated technology to increase the throughput of the screening process—the fundamental search for a compound that may have therapeutic value—and by providing richer informational content throughout the research process.

Two powerful new solutions: FLIPR^{TETRA}™ and SpectraMax® M5

In the second quarter of the year, we launched our state-of-the-art screening solution for drug discovery, FLIPR^{TETRA}, the fourth generation of our market-leading high-throughput screening system for cellular assays. FLIPR^{TETRA} handles microplates containing up to 1,536 wells; for calcium flux and membrane


ACCELERATE


SPEED

SpectraMax M5 Another new solution introduced in 2004 was the latest iteration of our SpectraMax family of microplate systems for the life sciences market. The SpectraMax M5 gives researchers a fast, flexible solution by combining the high throughput of a microplate reader with the versatility of a cuvette port for three modes of spectrophotometry.

potential assays, it is the first and only screening tool to offer such massive throughput, allowing the measurement and capture of 250,000 data points per day. FLIPR^{TETRA} significantly reduces screening time and reagent consumption, making it more efficient for pharmaceutical researchers engaged in drug discovery. It also handles more kinds of assays and operates more reliably. The introduction of FLIPR^{TETRA} enhanced our already powerful franchise in the drug discovery market and helped make 2004 a record-setting year for the FLIPR® family in terms of revenue.

The opportunities for the entire FLIPR solution set—multiple hardware and software systems and the consumable reagents that go with them—remain substantial. FLIPR is already the most widely used screening system for G-protein coupled receptors (GPCRs), one of the three most important classes of drug targets. Moreover, results from the Human Genome Project suggest that hundreds of additional GPCRs will be validated as possible drug targets, further expanding what is already the largest area of drug discovery activity. Molecular Devices is the market leader in this category, and we expect the newest member of the FLIPR family to continue to fuel growth for us.

Also in 2004, we introduced a powerful new extension to our popular SpectraMax line of microplate readers: the SpectraMax M5, a five-mode, multi-detection system featuring a triple-mode cuvette port. The SpectraMax M5, like the SpectraMax M2 introduced in 2003, enables life sciences and drug discovery researchers to replace multiple instruments with a single, compact, flexible, high-performance system while at the same time offering increased flexibility and productivity.

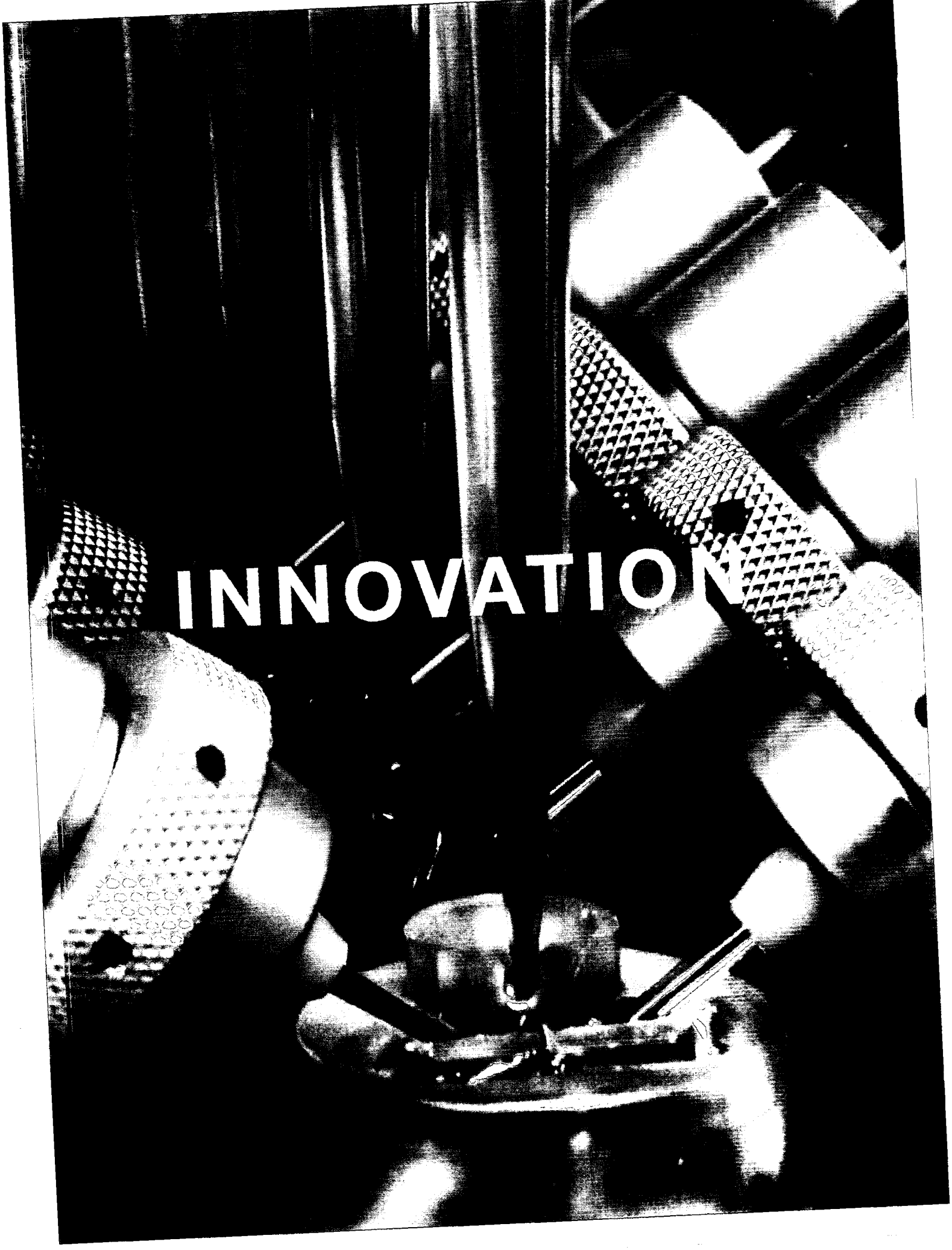
Axon Instruments With the 2004 acquisition of Axon Instruments, Molecular Devices achieved three important strategic objectives: we solidified our positions in imaging and electrophysiology; we expanded our product portfolio with systems for cellular neurosciences and genomics; and finally, we enhanced our product development potential with Axon's expertise in engineering and software.

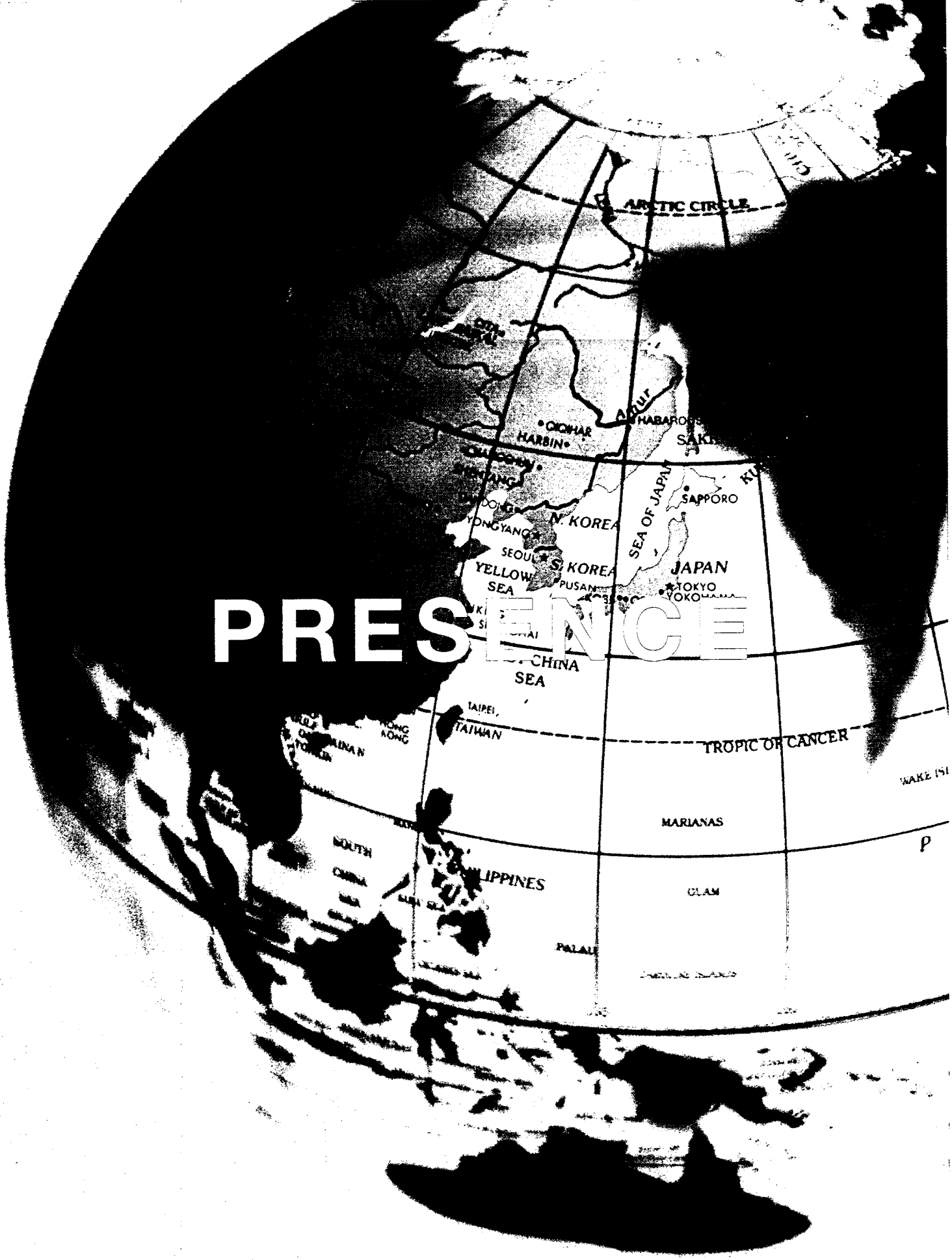
New opportunities: The acquisition of Axon Instruments

We have often stated the financial importance of innovation this way: our goal is to derive at least 50% of revenues from products introduced in the past three years. In 2003, 60% of revenues came from recently introduced products; in fiscal 2004, the figure was 69%. New products are the result of two important elements of our strategy: our substantial investment in research and development (amounting to $22 million, or 15% of total revenues, in 2004) and acquisition. In 2004, we acquired Axon Instruments, Inc., a biotechnology tool company located near our own headquarters in Silicon Valley.

Axon's products complement and deepen our existing solution sets. The ImageXpress® high-throughput imaging system addresses similar applications to Discovery-1™ but uses a different technical approach, designed, developed, and manufactured at Axon. In electrophysiology, the PatchXpress® system offers automated patch clamping with lower throughput than IonWorks® HT but with greater flexibility, including the ability to measure ligand-gated ion channels. We now believe that we are among the market leaders in both cellular imaging and automated electrophysiology. The acquisition also gives Molecular Devices an immediate presence in two new markets—cellular neurosciences and genomics—adding two new families of detection tools to our life sciences product portfolio. These products are used extensively in pharmaceutical, biotechnology, and academic environments, often as an upstream step in the same discovery processes as our microplate systems.

The acquisition offers two other substantial benefits beyond enriching our product set and market reach. First, it provides us with the opportunity to leverage our already extensive global infrastructure to offer a broader set of products to our customers. Perhaps even more important to our future, however, is the


INNOVATION


ARCTIC CIRCLE
HARBIN
SAPPORO
N. KOREA
SEA OF JAPAN
S. KOREA
JAPAN
YELLOW SEA
PUSAN
TOKYO
CHINA SEA
TAIWAN
TROPIC OF CANCER
MARIANAS
GUAM
PRESENCE

Global Presence By increasing our presence in several key markets, including Scandinavia, northern Europe, and the Pacific Rim, Molecular Devices enhanced its ability to serve the global markets for drug discovery and life sciences.

new product development potential offered by the combination of Molecular Devices and Axon. We share a corporate culture with many similarities: a focus on the detection of biological events, world-class engineering capabilities, and similar visions of the emerging opportunities in high-throughput imaging and electrophysiology. Axon had a particularly strong core competency in software development, a key source of differentiation and now an even more important component of our own strategic intent. Our objective is to apply that core competency broadly to our product development efforts so we can enhance our competitive position in the marketplace.

Expanding our global presence

Drug discovery and life sciences research are global endeavors, but a local presence can be a powerful competitive advantage in terms of attracting new customers and serving existing ones. Molecular Devices has steadily enhanced its global reach over the years, but in 2004, a number of events gave us an even broader and deeper presence around the world. We acquired our Benelux distributor. We deployed our first sales and service professionals in Scandinavia, South Korea, and China to add to our existing offices and direct representatives in the United Kingdom, Germany, Japan, Norway, France, and Spain. At the end of fiscal 2004, Molecular Devices had more than 200 people working directly with customers around the world. International revenues in 2004 (including both products and services) represented approximately 42% of our total revenues.

Looking forward

Molecular Devices has generated a lot of positive news in fiscal 2004, but the core of who we are and what we do has not changed—and we believe that our existing strengths continue to serve us well:

• First, we offer powerful, robust solutions for screening the three main classes of drug targets: GPCRs, ion channels, and kinases. Our sophisticated systems, which include hardware, software, and a growing family of consumables and reagents, represent complete solutions for screening and information generation in the pursuit of new drugs and novel research. Additionally, we are technology leaders in microplate detection.

• Second, we manage our own business prudently from a financial perspective. We have a strong balance sheet with no outstanding debt which gives us the financial flexibility to pursue strategic options such as acquisitions. In one notable 2004 event, we realized a substantial gain on the sale of one of our private equity interests. Strong operating cash flow was also critical to our ability to continue repurchasing shares of Molecular Devices common stock. In 2004 we repurchased 1.6 million shares. This came on top of the 2.4 million of our shares repurchased since 2001.

• Third, we have a talented, professional, and dedicated workforce, now totaling approximately 550 people around the world. They performed superbly in 2004, and they give me tremendous confidence in our company's ability to deliver value to customers and generate returns for stockholders. I personally want to thank them for their hard work and commitment.

• And finally, of course, is the opportunity represented by the two markets we serve: drug discovery and life sciences research, including pharmaceutical and biotechnology companies, as well as universities, medical centers and government laboratories. Our customers invest substantial amounts in research and development, and they continue to look for solutions that enrich and accelerate their efforts. Many of the companies and institutions within the drug discovery and life sciences research markets are already customers. Our reputation with them is strong, and the strategic progress we made in 2004 makes it even stronger and will enable us to forge new customer relationships.

All these elements of our business give us confidence about the future of Molecular Devices. I look forward to reporting on our progress in 2005 and beyond.

Sincerely,

Joseph D. Keegan

Joseph D. Keegan, Ph.D.
President and Chief Executive Officer

Financial highlights

(Years ended December 31) Consolidated Statements of Income Data: (in thousands, except per-share data)	2004	2003	2002
Revenues	$ 148,529	$ 115,581	$ 102,157
Gross profit	92,255	72,325	61,596
Income from operations	11,591 [1]	10,189	8,159
Net income	17,233 [1], [2]	7,742	6,805
Fully diluted net income per share	1.04 [1], [2]	0.51	0.44

Consolidated Balance Sheet Data: (in thousands)	2004	2003	2002
Cash, cash equivalents, short- and long-term investments	$ 30,175	$ 60,110	$ 53,783
Working capital	67,556	87,305	84,851
Total assets	255,229	166,913	162,901
Total stockholders' equity	210,620	145,538	142,804

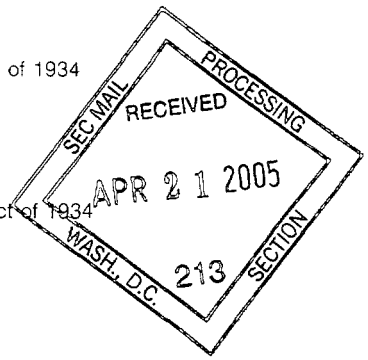
(1) Our income from operations in 2004 included a $5.0 million write-off for acquired in-process research and development related to our acquisition of Axon Instruments, Inc.

(2) Our net income and fully diluted net income per share in 2004 included an $18.3 million gain on the sale of equity securities.

United States
Securities and Exchange Commission

Washington, D.C. 20549

FORM 10-K



[x] Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2004

or

[ ] Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from _____ to _____.

Commission File Number 0-27316

MOLECULAR DEVICES CORPORATION

(Exact name of Registrant as specified in its charter)

DELAWARE	94-2914362
(State or other jurisdiction of Incorporation or organization)	(I.R.S. Employer Identification Number)
1311 ORLEANS DRIVE, SUNNYVALE, CALIFORNIA	94089
(Address of principal executive offices)	(Zip code)

(408) 747-1700
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:
NONE

Securities registered pursuant to Section 12(g) of the Act:
TITLE OF EACH CLASS
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 [X] NO [ ]

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

Indicate by check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes [X] No [ ]

The aggregate market value of the voting stock held by non-affiliates of the Registrant as of June 30, 2004, based upon the last sale price reported for such date on The Nasdaq Stock Market℠, was $140,788,387. *

The number of outstanding shares of the Registrant's Common Stock as of March 7, 2005 was 16,890,215.

DOCUMENTS INCORPORATED BY REFERENCE

Specified portions of the Proxy Statement for Registrant's 2005 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after December 31, 2004 are incorporated by reference into Part III of this Form 10-K Report.

---

* Excludes approximately 7,839,809 shares of common stock held by directors, officers and holders of 5% or more of the Registrant's outstanding Common Stock at June 30, 2004. Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the Registrant, or that such person is controlled by or under common control with the Registrant.

table of contents

molecular devices corporation

part I

Item 1. Business

THE COMPANY

Except for the historical information contained herein, the following discussion contains "forward-looking" statements. For this purpose, any statements that are not statements of historical fact may be deemed to be forward-looking statements. Words such as "believes," "anticipates," "plans," "predicts," "expects," "estimates," "intends," "will," "continue," "may," "potential," "should" and similar expressions are intended to identify forward-looking statements. There are a number of important factors that could cause our results to differ materially from those indicated by these forward-looking statements, including, among others, those discussed in this item under "Business Risks" as well as in Item 7A — "Quantitative and Qualitative Disclosures About Market Risk" and the risks detailed from time to time in the Company's future SEC reports.

We are a leading supplier of high-performance bioanalytical measurement systems that accelerate and improve drug discovery and other life sciences research. Our systems and consumables enable pharmaceutical and biotechnology companies to leverage advances in genomics, proteomics and parallel chemistry by facilitating the high-throughput and cost-effective identification and evaluation of drug candidates. Our solutions are based on our advanced core technologies that integrate our expertise in engineering, molecular and cell biology, and chemistry. We enable our customers to improve research productivity and effectiveness, which ultimately accelerates the complex process of discovering and developing new drugs.

INDUSTRY BACKGROUND

In recent years, research in the life sciences industry has accelerated as funding from major private and public sources has significantly increased. This expansion of research activity has yielded discoveries that are currently fueling a revolution in our understanding of human health and disease. One major milestone, the sequencing of the human genome, was widely celebrated not only as an important scientific advance in itself, but also as a starting point for a much broader exploration of fundamental biological processes. The genome map is significant because genes provide the code that cells use to make proteins, and proteins play a central role in every aspect of the body's function. Learning which genes code for various proteins, which proteins are involved in different biological events, and how these proteins function or malfunction are all challenges that are now being tackled by scientists on an unprecedented scale. By better understanding biology at the level of genes, proteins and cells, researchers hope to discover the underlying causes of human disease and determine new ways to treat them.

Because of their critical role in the body, proteins that malfunction or are present in abnormal quantities can cause problems that are manifested as diseases. Drugs typically fight illness by binding to such proteins, known as "targets," and modifying their behavior to reduce their disease-causing effects. Collectively, all of the drugs currently on the market are aimed at approximately 400 distinct protein targets in the human body. The human genome map has revealed the existence of an additional 3,000-5,000 targets that may be associated with a variety of diseases. This expansion in the number of potential drug targets is driving increased activity in two areas of scientific inquiry, basic life sciences research and drug discovery.

Understanding the role of genes and proteins in human health is a goal of basic life sciences research, which is conducted by a wide variety of pharmaceutical, biotechnology, academic and other organizations. Once a protein's link to a disease is understood, the task of finding a drug that acts on the protein and treats the disease is undertaken primarily by pharmaceutical and biotechnology companies. These companies typically own "libraries" of drug candidates comprising hundreds of thousands, or even millions, of chemical compounds. In order to determine which compounds are effective against a particular target, a test, or assay, must be developed to detect whether a compound has modified the behavior of the target, then this test must be repeated for each compound in the library. In recent years, this "screening" process has become industrialized as companies have invested in automated, high-throughput equipment to handle the increasing numbers of new targets and compounds. The type of technology researchers use when they screen drug candidates depends upon the class of target that they are investigating.

Drug targets can be grouped into several classes based on their biological characteristics. The targets in a particular class tend to share similar behaviors, such as their ability to bind to small drug molecules. Researchers, particularly in pharmaceutical companies, tend to focus their efforts on those classes that are most involved in important health conditions and most readily modified by drugs. Because they fulfill these key requirements, three target classes known as G-protein coupled receptors, kinases and ion channels are the subject of over 60% of all drug discovery research.

G-PROTEIN COUPLED RECEPTORS

More than half of existing drugs act on G-protein coupled receptors, or GPCRs, and more than 30% of current research activity is focused on this target class. Residing on the surfaces of cells, GPCRs are proteins that are involved in critical biological processes such as cardiovascular and central nervous system functioning. Diseases of these systems have been linked to GPCRs, and GPCRs are also known to play a role in a variety of other conditions such as diabetes and cancer. Scientists have identified and characterized over 100 GPCRs. However, genomic data now suggests that the number of distinct human GPCRs may be as great as 1,000. This information has resulted in increased research efforts to characterize the hundreds of unknown GPCRs and understand their disease associations.

We offer products that enable a full range of GPCR-related research, from identifying new GPCRs to screening drug candidates for GPCR activity. In drug discovery, the most widely accepted GPCR test involves the detection of a calcium release that occurs in cells when a GPCR is activated. We were the pioneer in automating this assay and remain the industry leader in GPCR screening. We provide customers with complete instrument and reagent solutions including the Fluorometric Imaging Plate Reader (FLIPR®), the FlexStation® and proprietary assay kits for performing GPCR analysis.

KINASES

Kinases are enzymes that control many of the pathways through which cellular signals are conducted. Because signaling is a key aspect of cell activity, kinases are centrally involved in a large number of biological processes. Genomic research indicates that humans have approximately 500 different kinases, and errors in their function can result in conditions such as cancer, inflammation and diabetes. Kinases, along with their counterpart phosphatases, account for over 21% of research activity, and every pharmaceutical company is currently developing kinase-inhibiting drugs.

We offer solutions for kinase screening that avoid some of the major drawbacks of other technologies. Many existing methods for testing kinases involve multiple steps and require radioactive labels or the production of antibodies, a time-consuming and expensive process. Our approach uses a technology called fluorescence polarization (FP) to perform kinase assays in a single step and without radioactivity or antibodies. This technique is enabled by our Analyst® instrument, which is the industry standard for FP detection, and our proprietary IMAP® reagent kits.

ION CHANNELS

Ion channels comprise proteins that reside in cell membranes and control the flow of charged atoms through these membranes. Disorders of the cardiovascular and central nervous systems, as well as conditions such as diabetes and asthma, have been linked to ion channels. Additionally, some severe and even fatal side effects of drugs result from their unintended interference with ion channel activity. In recent years, the withdrawal of a number of high-profile drugs from the market due to their impact on ion channels has dramatically increased the interest of pharmaceutical companies in testing for this safety problem early in the development process.

The influence of chemical compounds on the activity of ion channels is difficult to test. While some indirect methods are available, the most valuable information is provided by direct approaches called "patch clamping" and "voltage clamping" which conventionally are slow and tedious. To address this problem, we offer a series of electrophysiology systems, which include IonWorks™, PatchXpress® and OpusXpress®, a family of automated patch and voltage clamping systems that dramatically increase ion channel assay throughput.

OUR PRODUCTS

We offer a full range of high-performance bioanalytical systems including specialized screening solutions for the three major target classes and a variety of general-purpose research instruments. We group our product offerings into two categories, drug discovery and life sciences research, to reflect the markets they primarily address. In July 2004, we

completed our acquisition of Axon Instruments, Inc., which enabled us to broaden both our drug discovery and life sciences research product offerings. We had revenues of $148.5 million in 2004, $115.6 million in 2003 and $102.2 million in 2002. Most of our products use optical technologies to detect the results of biological tests that occur in microplates. A microplate is a disposable vessel comprised of a standardized array of 96, 384 or 1,536 wells that are similar to small test tubes. This format has been widely adopted by scientists because it allows many experiments to be performed in parallel, enhancing the efficiency of research efforts. In recent years, customers have increasingly sought the cost and throughput benefits of the higher-density 384 and 1,536 well configurations, a trend that we expect to continue.

DRUG DISCOVERY PRODUCTS

Our drug discovery systems, which represented 41% of our total revenues in 2004 and 45% of our total revenues in 2003 and 2002, are used to screen large numbers of chemical compounds to assess their effects on disease targets. This category includes our FLIPR, Analyst, electrophysiology systems and imaging systems product families.

FLIPR System and Reagent Kits

Since its introduction in 1995, our FLIPR system has become the industry standard for GPCR screening. FLIPR addresses a key market need for automating a common GPCR test based on the phenomenon of calcium flux. The activation of many types of GPCRs triggers a release of calcium within the cell, an event that can be detected using a calcium-sensitive fluorescent dye. Because this assay requires live cells and produces only a brief signal, it cannot be performed on standard bioanalytical instruments. FLIPR's optical and fluidic systems are specialized for this type of assay, automating the process and enabling multiple experiments to be performed simultaneously in microplates. Because of its unique configuration, FLIPR is also able to perform other complex live cell assays, such as detecting changes in cellular membrane potential. Our FLIPR instrumentation is complemented by our FLIPR reagent kits, which use a proprietary technology to reduce the number of steps involved in GPCR or membrane potential testing.

- FLIPR^{TETRA}. This product is the fourth generation FLIPR instrument. It combines all of the benefits of preceding versions of FLIPR with new capabilities in a completely redesigned, compact platform. FLIPR^{TETRA} features simultaneous liquid transfer of samples in 96, 384 and 1,536 well microplates, allowing customers to screen as many as 250,000 samples daily with little human intervention. In addition, the instrument reads multiple wavelengths, enabling a broader set of applications, and incorporates interfaces that allow it to integrate into automated screening lines.

- FLIPR Assay Kits. This product family includes the FLIPR Calcium Flux Kit, the FLIPR Calcium Plus Kit, the FLIPR Calcium 3 Kit and two formulations of the FLIPR Membrane Potential Kit. By eliminating a step in the assay protocol, these kits can significantly increase throughput, reduce costs and increase screening efficiency. The FLIPR Calcium Flux Kit addresses the most popular assay performed on the FLIPR system for detecting the activation of GPCRs. The FLIPR Calcium Plus Kit and the FLIPR Calcium 3 Kit extend the applicability of this assay by allowing researchers to test problematic but important targets such as chemokines and other small peptides. In addition, these kits offer a significant improvement in data quality compared to traditional methods. The FLIPR Membrane Potential Kits allow researchers to measure changes in the electrical potential across live cell membranes, a key indicator of ion channel activity.

Analyst System and Reagent Kits

Our Analyst family of products provides a novel solution for kinase screening as well as industry-leading flexibility and throughput for a wide range of other assays. Instruments in this family feature several different detection technologies, allowing customers to choose the one that is optimal for their particular screen. One of these detection modes, fluorescence polarization (FP), has become popular in recent years because it enables assays to be performed with greatly simplified protocols. We were pioneers in developing the market for FP and we have successfully applied this technology to the area of kinase screening. Traditionally, tests of kinase activity have been performed using multi-step protocols that involve radioactive labels or highly specific antibodies. Because radioactivity is hazardous and antibody production is practical for only a small number of kinases, customers have sought better assays as the popularity of kinase targets has increased. To address this, we developed IMAP, a simple, non-radioactive, antibody-free technology that allows accurate determination of enzyme activity for a wide variety of kinases and phosphatases.

- Analyst GT. This multi-mode system features seven detection options and the ability to read 96, 384 and 1,536 well microplates. With the capacity to test over 400,000 wells per day, Analyst GT is designed to address the high throughput screening needs of the drug discovery market.
- *ScreenStation*™. *This instrument integrates the detection capabilities of the Analyst platform with assay assembly,* providing a highly automated screening system.
- IMAP Assay Kits. A proprietary bead-based platform, IMAP allows researchers to determine the activity of kinases, phosphatases and phosphodiesterases in a simple, non-radioactive format. We currently offer 23 kits that feature the *most popular kinases for screening. In addition to the kits, the IMAP platform is also available to customers through our* technology access program, which allows researchers to apply this extremely flexible technology to a wide variety of protein kinase targets.

Electrophysiology Systems

We are an industry leader in ion channel screening, offering a complete range of first-of-a-kind products that allow automated testing of this important target class. Traditionally, the most valuable information on ion channel activity has been obtained through patch clamping, a time-consuming, low-throughput method that is best performed by highly skilled scientists. The few higher-throughput alternatives that were available used indirect methods to assay ion channels, an approach that yields less useful data than patch clamping. *Our electrophysiology products are automated* systems that obtain the same high-quality information from cells as conventional patch clamping, but at a much faster rate and requiring far less operator skill. While traditional patch clamping may allow researchers to test only 5-15 compounds per day, our electrophysiology systems operate at speeds ranging from hundreds to thousands of compounds per day.

- IonWorks HT. IonWorks HT is our original high throughput electrophysiology system. It is a turnkey system consisting of an instrument and a proprietary consumable plate.
- IonWorks Quattro. This system expands on the capabilities of the IonWorks HT, offering up to a four-fold increase in throughput and a 50% reduction in cost per compound tested. IonWorks Quattro is compatible with the IonWorks HT consumable, and also features its own consumable plate that enables enhanced performance.
- PatchXpress 7000A. This system offers automated patch clamping with a high degree of flexibility. It is capable of performing tests on the two major types of ion channels, voltage-gated and ligand-gated, and generating an entire response curve for each cell tested. Like the IonWorks HT, this system operates using its own proprietary consumable plate.
- OpusXpress 6000A. OpusXpress 6000A is an automated solution for the early-stage process of ion channel target identification, and enables efficient pharmacological testing in the later stages of drug discovery research.

Imaging Systems

We offer a family of imaging systems that enable customers to conduct microscope studies in an automated, high-throughput fashion. Following the completion of the human genome map, the acceleration of efforts to study the activity of proteins within cells and to characterize the many unknown drug targets has created a need for better ways to visualize cellular events. Life sciences researchers generally use microscopes to view activity inside a cell; however, in a drug screening environment, greater throughput is required than can be achieved through traditional microscope studies. Our imaging systems automate the process of acquiring detailed images of individual cells and allow researchers to do so in the automation-friendly format of a microplate.

- ImageXpress® 5000A. ImageXpress 5000A is an integrated hardware and software system capable of very rapid image acquisition and sophisticated image analysis. The system is easily upgradeable to allow environmental control and liquid handling, both of which enable live cell imaging applications.
- Discovery-1™. Discovery-1 features the unique flexibility and analytical robustness of our industry-leading MetaMorph® software. The system includes patented optics that enable the high-throughput imaging of 96, 384 and 1,536 well microplates and is compatible with a variety of laboratory automation equipment.

LIFE SCIENCES RESEARCH PRODUCTS

Our life sciences research products, which represented 59% of total revenues in 2004 and 55% of total revenues in 2003 and 2002, encompass our microplate detection, genomics, imaging software, cellular neurosciences, liquid handling and Threshold® product lines.

Microplate Detection

Our microplate detection products consist of our SpectraMax® and FlexStation® families of advanced microplate readers. Microplate readers have become one of the most fundamental tools used in life sciences research by addressing the increasing need for the acquisition and processing of large quantities of biochemical and biological data. Because of the productivity gains offered by their multi-sample format, microplates have largely replaced test tubes and cuvettes for many life sciences applications.

The basic principles of microplate readers are that light from an appropriate source is directed to a wavelength selection device, such as a monochromator, and its intensity is measured either before and after, or just after, passing through each of the sample wells of a microplate. Application of a mathematical formula to the light intensity measurements of each microplate well provides a measure of the sample present in the well. One type of measurement, known as optical density, is proportional to the concentration of the substance that is being measured. Other important types of light intensity measurement are fluorometry and luminometry, both of which provide quantitative information comparing the different samples in a microplate with each other.

SpectraMax

Our SpectraMax strategy has been to continue to introduce new products that include first-of-a-kind features, as well as to offer varying feature sets and price points to address different market segments. We have historically focused on the premium end of the microplate reader market through offering products with advanced capabilities. Some of the first-of-a-kind features that we have pioneered include the first reader and software capable of kinetic analysis, the first monochromator-based reader that enabled continuous wavelength selection and the first reader capable of performance comparable to a spectrophotometer. In each case, we believe that the innovation helped expand the utility of microplate readers and, more broadly, the available market for microplate readers. Our SpectraMax family currently includes the following products:

- EMax®. This product is aimed at the market for traditional microplate readers that do not require kinetic capability. We introduced it to provide a reader for customers in academia and other customers with restricted capital budgets.
- VMax®. This was the first microplate reader to offer kinetic read capability and is designed to address the needs of biochemists.
- VersaMax™. The VersaMax is our low cost variable wavelength offering that provides kinetic capability and temperature control.
- SpectraMax 340PC^{384}. This product is a visible range microplate spectrophotometer, offering tunability and the additional capability of our patented PathCheck® Sensor technology, which corrects common variability problems across wells of microplates.
- SpectraMax 190. The predecessor to this product was the world's first microplate reader that incorporated a monochromator for continuous wavelength selection. Wavelength selection provides for enhanced convenience and flexibility in assay design. In addition, the SpectraMax 190 also includes our patented PathCheck Sensor technology.
- SpectraMax Plus^{384}. The SpectraMax Plus^{384} combines the high-throughput of a microplate reader with the performance of a cuvette-based spectrophotometer as a result of our patented PathCheck Sensor technology. It is capable of reading wavelengths as short as 190 nanometers and as long as 1,000 nanometers, the equivalent range to a spectrophotometer, and is compatible with both 96-well and 384-well microplates.
- Gemini XPS. Gemini was the world's first dual-scanning microplate spectrofluorometer, a configuration that allows the user to automatically optimize the instrument for particular assays. The Gemini XPS, introduced in 2004, is the

most sensitive version of Gemini yet and is capable of fluorescence, luminescence and time-resolved fluorescence measurements.

- Gemini EM. The Gemini EM features the ability to read microplates from either the top or the bottom, a capability that enables it to perform complex cell-based assays.

- LMax™ II and LMax II^{384}. LMax was our first reader to offer customers sensitive luminescence detection in a benchtop instrument. The second generation of LMax adds improved sensitivity and the capability to integrate with laboratory robots.

- SpectraMax M2. This instrument incorporates the dual-scanning monochromator technology of the Gemini family into a multimode reader with both absorbance and fluorescence detection. SpectraMax M2 can read 96 and 384 well microplates using any of four different scanning techniques. This combination of features makes the SpectraMax M2 a highly versatile instrument capable of a wide range of applications.

- SpectraMax M5. Introduced in 2004, this instrument expands our multimode reader family by offering the performance features of the SpectraMax M2 with the flexibility of five different detection modes. Our most versatile benchtop reader, the SpectraMax M5 is capable of absorbance, fluorescence intensity, fluorescence polarization, time-resolved fluorescence and luminescence measurements.

FlexStation

Our FlexStation system is a benchtop workstation that integrates liquid handling and detection and has applications in drug discovery as well as life sciences research. This product offers flexibility to address a wide range of research applications by combining both multi-channel, plate-to-plate fluid transfer and fluorescence measurement in one system. For drug discovery applications, FlexStation provides a convenient means of developing assays for later transfer to higher-throughput screening. For basic and applied research in life sciences, the flexibility of this system enables scientists to develop, optimize and run their assays on one system with the same small footprint as a standard benchtop microplate reader. In 2003, we introduced a new generation of FlexStation comprising two instruments, FlexStation II and FlexStation II^{384}.

We offer five proprietary reagent kits that are based on our successful FLIPR assay technology and are optimized to perform on the FlexStation system. These products are our FlexStation Calcium Flux Assay Kit, FlexStation Calcium Plus Assay Kit, FlexStation Calcium 3 Assay Kit and two formulations of the FlexStation Membrane Potential Assay Kit.

Microarray Systems

Because of the central role that genes play in human health and disease, the study of genes, or genomics, is a fundamental area of life sciences research. By studying the varying levels of gene expression among members of a population or between healthy and diseased tissues, researchers can learn the functions of tens of thousands of genes that constitute the genomes of humans and other complex organisms. Microarrays, which allow the high-throughput identification of large numbers of genes, have been an enabling technology in this field. Our GenePix® family, a complete line of instruments and software for analyzing microarrays, includes the following products:

- GenePix 4000B. The GenePix 4000B is the fastest and most compact microarray scanner on the market today. Unlike most commercially available scanners, this instrument acquires data simultaneously at two wavelengths, resulting in superior speed and a low error rate. Like all of our microarray scanners, the GenePix 4000B comes with our popular and user-friendly GenePix Pro software for data acquisition and analysis.

- GenePix Professional 4200A. This instrument offers the performance of the GenePix 4000B with additional features such as four-color scanning and enhanced flexibility. An optional accessory, the Autoloader 4200AL, automates the process of introducing microarrays to the instrument, an important feature for high-volume laboratory environments.

- GenePix Personal 4100A. This instrument offers the superior performance of the GenePix family in a lower-cost, more compact version that addresses the needs of the individual researcher.

- Acuity® 4.0. This software package provides applications for advanced users, including data warehousing, sophisticated data analysis and visualization applications. It is compatible with the GenePix family of scanners as well as other commercially available microarray platforms.

Imaging Software

We offer software that works in tandem with microscope and camera systems to enable researchers to acquire images of cells and quantify and analyze the images in a variety of ways. This product family consists of the following software packages:

- MetaMorph®. MetaMorph software is a state-of-the-art software package for capturing and analyzing cellular images. MetaMorph's functions include control of a wide variety of imaging devices as well as a large menu of tools for image processing and analysis.
- MetaFluor®. MetaFluor software allows researchers to image and analyze ratiometric indicators of intracellular events.
- MetaVue™. A lower-cost version of MetaMorph, MetaVue is an entry-level product tailored to common imaging applications.

We sell our imaging software either as a stand-alone product or as part of an integrated system including a camera, software and peripherals. We are an authorized reseller of cameras and peripheral equipment for several major manufacturers, including Nikon and Roper. Additionally, we have authorized several value-added resellers, who integrate multiple components to create complete imaging systems, to distribute our imaging software.

Cellular Neurosciences

We are a leading supplier of signal amplification instruments and related software for cellular neurosciences research, offering a range of products for voltage recording, current and voltage clamping and patch clamping. Our microelectrode amplifiers are more sensitive than any competing product, enabling scientists to perform experiments that would otherwise be impossible. In addition, we offer software packages for the acquisition and analysis of electrophysiological data and various accessories for the electrophysiology workstation.

Liquid Handling

We offer a line of liquid handling systems that includes a variety of cell and plate washers with 96, 384 and 1,536 well dispensing and washing capabilities. Washers are used to dispense and remove fluid from microplates and are used as an integral step during the course of many assays. Our liquid handling systems bring a complete line of state-of-the-art microplate washers and other related tools, including cell harvesters, to the life sciences research product family.

Threshold System

As a result of the growing number of biopharmaceutical therapeutics both entering clinical trials and receiving regulatory approval for commercial sale, there is demand for systems that can quantitate contaminants in the manufacturing and quality control of bioengineered products. Our Threshold system, which comprises a detection instrument and reagents, incorporates a proprietary technology to quantitate a variety of biomolecules such as DNA, proteins and mRNA rapidly and accurately. The Threshold system emerged from a need by biopharmaceutical companies for more sensitive and reproducible methods to detect contaminants in biopharmaceuticals during the manufacturing and quality control process. The Threshold family of products includes a workstation, software and consumable reagent kits.

OTHER SOFTWARE AND CUSTOMER SERVICE

All of our instrument products incorporate internally designed and developed software that is sold as an integral part of the instrument system. We believe that our software is an important differentiator for our instrument products relative to the competition based on its ease-of-use and advanced data analysis and validation capabilities.

Our service and support offerings include field service, customer support, applications assistance and training through an organization of factory-trained and educated service and application support personnel around the world. We offer services to our installed base of customers on both a contract and time and materials basis and we offer a variety of post-

warranty contract options for all our instrument offerings that customers may purchase. Our installed base provides us with stable, recurring after-market service and support revenue, as well as product upgrade and replacement opportunities.

RESEARCH AND DEVELOPMENT

Our research and development team included 139 full time employees as of December 31, 2004. We have typically invested 15% to 18% of our revenues in research and development, which has resulted in a strong track record of technological innovation. In 2004, 69% of our revenues were derived from products that we introduced in the last three years. Our research and development expenditures, excluding in-process research and development charges in 2004, were approximately $22.0 million in 2004, $18.7 million in 2003 and $18.0 million in 2002.

Our research and development activities are focused on:

- broadening our technology solution, including development of new proprietary reagent kits and additional solutions for automated cell electrophysiology measurements;
- providing more sensitive quantitative evaluation of biological events;
- providing greater throughput capability, especially with smaller sample volumes; and
- developing increasingly sophisticated data management and analysis capability.

MARKETING AND CUSTOMERS

Our sales and marketing organization included 207 full time employees in North America, Europe, Asia and Australia as of December 31, 2004. We distribute our products primarily through direct sales representatives in North America. We have subsidiaries in the United Kingdom, Germany, Japan and South Korea responsible for selling and servicing our products. Our direct sales effort is supported by a team of service, technical and applications specialists employed by us. We also sell our products through international distributors, most of which enter into distribution agreements with us that provide for exclusive distribution arrangements and minimum purchase targets. Such agreements also generally prohibit the distributors from designing, manufacturing, promoting or selling any products that are competitive with our products.

Our customers include leading pharmaceutical and biotechnology companies as well as medical centers, universities, government research laboratories and other institutions throughout the world.

Sales to customers outside the United States accounted for 42% of total revenues in 2004, and 39% in 2003 and 2002, and total sales denominated in foreign currencies accounted for 31%, 32% and 31% of total revenues in 2004, 2003 and 2002, respectively. We anticipate that international sales will account for an increasing percentage of revenues in the future. We expect to continue expanding our international operations in order to take advantage of increasing international market opportunities resulting from worldwide growth in the life sciences industry.

MANUFACTURING

We manufacture our products at our facilities in Sunnyvale and Union City, both in California, and in Norway. Our Sunnyvale and Norway facilities are both ISO 9000:2000 certified. We assemble the Discovery-1 system at our facility in Downingtown, Pennsylvania, which is also ISO 9000:2000 certified. We manufacture our own components where we believe it adds significant value, but we rely on suppliers for the manufacture of selected components and subassemblies, which are manufactured to our specifications. We conduct all final testing and inspection of our products. We have established a quality control program, including a set of standard manufacturing and documentation procedures intended to ensure that, where required, our products are manufactured to comply with good manufacturing practices.

PATENTS AND PROPRIETARY TECHNOLOGIES

We protect our proprietary rights from unauthorized use by third parties to the extent that our proprietary rights are covered by valid and enforceable patents or are effectively maintained as trade secrets. Patents and other proprietary rights are an essential element of our business. Our policy is to file patent applications and to protect technology, inventions and improvements to inventions that are commercially important to the development of our business. As of

December 31, 2004, we were maintaining 106 U.S. patents and other corresponding foreign patents based on our discoveries that have been issued or allowed. These patents expire at various dates between 2004 and 2025. In addition, as of December 31, 2004, we had 58 patent applications pending in the United States and had filed several corresponding foreign patent applications.

We are a party to various license agreements that give us rights to use certain technologies. We pay royalties to the parties from which we licensed or acquired the core technologies.

We also rely on trade secret, employee and third-party nondisclosure agreements and other protective measures to protect our intellectual property rights pertaining to our products and technology.

COMPETITION

The market for bioanalytical instrumentation is highly competitive, and we expect competition to increase. We compete for the allocation of customer capital funds with many other companies marketing capital equipment, including those not directly competitive with any of our products. Some of our products also compete directly with similar products from other companies.

The drug discovery market is characterized by intense competition among a number of companies, including Amersham Biosciences (a subsidiary of GE Healthcare), Applied Biosystems, PerkinElmer and Tecan, that offer, or may in the future offer, products with performance capabilities generally similar to those offered by our products. We believe that the primary competitive factors in the market for our products are throughput, quantitative accuracy, breadth of applications, ease-of-use, productivity enhancement, quality, support and price/performance. We believe that we compete favorably with respect to these factors.

The life sciences research market is also very competitive and includes a number of companies, such as Agilent, Bio-Tek Instruments, PerkinElmer, Tecan and Thermo Electron, that offer, or may in the future offer, products with performance capabilities generally similar to those offered by our products. We expect that competition is likely to increase in the future, as several current and potential competitors have the technological and financial ability to enter the markets we serve. Many of our life sciences products are priced at a premium; in these markets, we compete primarily on the basis of performance and productivity. Many companies, research institutions and government organizations that might otherwise be customers for our products employ methods for bioanalytical analysis that are internally developed.

Many of our competitors have significantly greater financial, technical, marketing, sales and other resources than we do. In addition to competing with us with respect to product sales, these companies and institutions compete with us in recruiting and retaining highly qualified scientific and management personnel.

GOVERNMENT REGULATION

In the United States, the development, manufacturing, distribution, labeling and advertising of products intended for use in the diagnosis of disease or other conditions is extensively regulated by the U.S. Food and Drug Administration, known as the FDA. These products generally require FDA clearance before they may be marketed, and also are subject to postmarket manufacturing, reporting and labeling requirements. With the exception of certain of our SpectraMax microplate readers, none of our products is intended for use in the diagnosis of disease or other conditions, and, therefore, they are not currently subject to FDA regulation. The SpectraMax readers intended for diagnostic uses are the subject of an FDA marketing clearance. If we were to offer any of our other products for diagnostic uses, those products would become subject to FDA regulation.

EMPLOYEES

As of December 31, 2004, we employed 542 persons full time, including 139 in research and development, 145 in manufacturing, 207 in marketing and sales and 51 in general administration and finance. Of these employees, 150 hold Ph.D. or other advanced degrees. None of our employees is covered by collective bargaining agreements, and we consider relations with our employees to be good.

BUSINESS RISKS

Our business faces significant risks and the risks described below may not be the only risks we face. Additional risks that we do not know of or that we currently think are immaterial may also impair our business operations. If any of the events or circumstances described in the following risks actually occurs, our business, financial condition or results of operations could be harmed and the trading price of our common stock could decline.

VARIATIONS IN THE AMOUNT OF TIME IT TAKES FOR US TO SELL OUR PRODUCTS AND COLLECT ACCOUNTS RECEIVABLE AND THE TIMING OF CUSTOMER ORDERS MAY CAUSE FLUCTUATIONS IN OUR OPERATING RESULTS, WHICH COULD CAUSE OUR STOCK PRICE TO DECLINE.

The timing of capital equipment purchases by customers has been and is expected to continue to be uneven and difficult to predict. Our products represent major capital purchases for our customers. The list prices for our instruments range from $5,000 to $419,500. Accordingly, our customers generally take a relatively long time to evaluate our products, and a significant portion of our revenues is typically derived from sales of a small number of relatively high-priced products. Purchases are generally made by purchase orders and not long-term contracts. Delays in receipt of anticipated orders for our relatively high-priced products could lead to substantial variability from quarter to quarter. Furthermore, we have historically received purchase orders and made a significant portion of each quarter's product shipments near the end of the quarter. If that pattern continues, even short delays in the receipt of orders or shipment of products at the end of a quarter could have a material adverse affect on results of operations for that quarter.

We expend significant resources educating and providing information to our prospective customers regarding the uses and benefits of our products. Because of the number of factors influencing the sales process, the period between our initial contact with a customer and the time when we recognize revenues from that customer, if ever, varies widely. Our sales cycles typically range from three to six months, but can be much longer. During these cycles, we commit substantial resources to our sales efforts in advance of receiving any revenues, and we may never receive any revenues from a customer despite our sales efforts.

The relatively high purchase price for a customer order contributes to collection delays that result in working capital volatility. While the terms of our sales orders generally require payment within 30 days of product shipment and do not provide return rights, in the past we have experienced significant collection delays. We cannot predict whether we will continue to experience similar or more severe delays.

The capital spending policies of our customers have a significant effect on the demand for our products. Those policies are based on a wide variety of factors, including resources available to make purchases, spending priorities and policies regarding capital expenditures during industry downturns or recessionary periods. Any decrease in capital spending by our customers resulting from any of these factors could harm our business.

WE DEPEND ON ORDERS THAT ARE RECEIVED AND SHIPPED IN THE SAME QUARTER AND THEREFORE HAVE LIMITED VISIBILITY OF FUTURE PRODUCT SHIPMENTS.

Our net sales in any given quarter depend upon a combination of orders received in that quarter for shipment in that quarter and shipments from backlog. Our products are typically shipped within ninety days of purchase order receipt. As a result, we do not believe that the amount of backlog at any particular date is indicative of our future level of sales. Our backlog at the beginning of each quarter does not include all product sales needed to achieve expected revenues for that quarter. Consequently, we are dependent on obtaining orders for products to be shipped in the same quarter that the order is received. Moreover, customers may reschedule shipments, and production difficulties could delay shipments. Accordingly, we have limited visibility of future product shipments, and our results of operations are subject to significant variability from quarter to quarter.

MANY OF OUR CURRENT AND POTENTIAL COMPETITORS HAVE SIGNIFICANTLY GREATER RESOURCES THAN WE DO, AND INCREASED COMPETITION COULD IMPAIR SALES OF OUR PRODUCTS.

We operate in a highly competitive industry and face competition from companies that design, manufacture and market instruments for use in the life sciences research industry, from genomic, pharmaceutical, biotechnology and diagnostic companies and from academic and research institutions and government or other publicly-funded agencies, both in the

United States and abroad. We may not be able to compete effectively with all of these competitors. Many of these companies and institutions have greater financial, engineering, manufacturing, marketing and customer support resources than we do. As a result, our competitors may be able to respond more quickly to new or emerging technologies or market developments by devoting greater resources to the development, promotion and sale of products, which could impair sales of our products. Moreover, there has been significant merger and acquisition activity among our competitors and potential competitors. These transactions by our competitors and potential competitors may provide them with a competitive advantage over us by enabling them to rapidly expand their product offerings and service capabilities to meet a broader range of customer needs. Many of our customers and potential customers are large companies that require global support and service, which may be easier for our larger competitors to provide.

We believe that competition within the markets we serve is primarily driven by the need for innovative products that address the needs of customers. We attempt to counter competition by seeking to develop new products and provide quality products and services that meet customers' needs. We cannot assure you, however, that we will be able to successfully develop new products or that our existing or new products and services will adequately meet our customers' needs.

Rapidly changing technology, evolving industry standards, changes in customer needs, emerging competition and frequent new product and service introductions characterize the markets for our products. To remain competitive, we will be required to develop new products and periodically enhance our existing products in a timely manner. We are facing increased competition as new companies entering the market with new technologies compete, or will compete, with our products and future products. We cannot assure you that one or more of our competitors will not succeed in developing or marketing technologies or products that are more effective or commercially attractive than our products or future products, or that would render our technologies and products obsolete or uneconomical. Our future success will depend in large part on our ability to maintain a competitive position with respect to our current and future technologies, which we may not be able to do. In addition, delays in the launch of our new products may result in loss of market share due to our customers' purchases of competitors' products during any delay.

IF WE ARE NOT SUCCESSFUL IN DEVELOPING NEW AND ENHANCED PRODUCTS, WE MAY LOSE MARKET SHARE TO OUR COMPETITORS.

The life sciences instrumentation market is characterized by rapid technological change and frequent new product introductions. In the year ended December 31, 2004, 69% of our revenues were derived from the sale of products that were introduced in the last three years, and our future success will depend on our ability to enhance our current products and to develop and introduce, on a timely basis, new products that address the evolving needs of our customers. We may experience difficulties or delays in our development efforts with respect to new products, and we may not ultimately be successful in developing or commercializing them, which would harm our business. Any significant delay in releasing new systems could cause our revenues to suffer, adversely affect our reputation, give a competitor a first-to-market advantage or cause a competitor to achieve greater market share. In addition, our future success depends on our continued ability to develop new applications for our existing products. If we are not able to complete the development of these applications, or if we experience difficulties or delays, we may lose our current customers and may not be able to attract new customers, which could seriously harm our business and our future growth prospects.

WE MUST EXPEND A SIGNIFICANT AMOUNT OF TIME AND RESOURCES TO DEVELOP NEW PRODUCTS, AND IF THESE PRODUCTS DO NOT ACHIEVE COMMERCIAL ACCEPTANCE, OUR OPERATING RESULTS MAY SUFFER.

We expect to spend a significant amount of time and resources to develop new products and refine existing products. In light of the long product development cycles inherent in our industry, these expenditures will be made well in advance of the prospect of deriving revenues from the sale of new products. Our ability to commercially introduce and successfully market new products is subject to a wide variety of challenges during this development cycle that could delay introduction of these products. In addition, since our customers are not obligated by long-term contracts to purchase our products, our anticipated product orders may not materialize, or orders that do materialize may be canceled. As a result, if we do not achieve market acceptance of new products, our operating results will suffer. Our products are also generally priced higher than competitive products, which may impair commercial acceptance. We cannot predict whether new products that we expect to introduce will achieve commercial acceptance.

WE OBTAIN SOME OF THE COMPONENTS AND SUBASSEMBLIES INCLUDED IN OUR SYSTEMS FROM A SINGLE SOURCE OR A LIMITED GROUP OF SUPPLIERS, AND THE PARTIAL OR COMPLETE LOSS OF ONE OF THESE SUPPLIERS COULD CAUSE PRODUCTION DELAYS AND A SUBSTANTIAL LOSS OF REVENUES.

We rely on outside vendors to manufacture many components and subassemblies. Certain components, subassemblies and services necessary for the manufacture of our systems are obtained from a sole supplier or limited group of suppliers, some of which are our competitors. Additional components, such as optical, electronic and pneumatic devices, are currently purchased in configurations specific to our requirements and, together with certain other components, such as computers, are integrated into our products. We maintain only a limited number of long-term supply agreements with our suppliers.

Our reliance on a sole or a limited group of suppliers involves several risks, including the following:

- our suppliers may cease or interrupt production of required components or otherwise fail to supply us with an adequate supply of required components for a number of reasons, including due to contractual disputes with our suppliers or due to adverse financial developments at or affecting the supplier;
- we have reduced control over the pricing of components and subassemblies, and our suppliers may be unable or unwilling to supply us with required components and subassemblies on commercially acceptable terms, or at all;
- we have reduced control over the timely delivery of components and subassemblies; and
- our suppliers may be unable to develop technologically advanced products to support our growth and development of new systems.

Because the manufacturing of certain of these components and subassemblies involves extremely complex processes and requires long lead times, we may experience delays or shortages caused by suppliers. We believe that alternative sources could be obtained and qualified, if necessary, for most sole and limited source parts. However, if we were forced to seek alternative sources of supply or to manufacture such components or subassemblies internally, we may be forced to redesign our systems, which could prevent us from shipping our systems to customers on a timely basis. Some of our suppliers have relatively limited financial and other resources. Any inability to obtain adequate deliveries, or any other circumstance that would restrict our ability to ship our products, could damage relationships with current and prospective customers and could harm our business.

WE MAY ENCOUNTER MANUFACTURING AND ASSEMBLY PROBLEMS OR DELAYS, WHICH COULD RESULT IN LOST REVENUES.

We manufacture our products at our facilities in Sunnyvale and Union City, both in California, and in Norway. We assemble the Discovery-1 system at our facility in Downingtown, Pennsylvania. Our manufacturing and assembly processes are highly complex and require sophisticated, costly equipment and specially designed facilities. As a result, any prolonged disruption in the operations of our manufacturing facilities could seriously harm our ability to satisfy our customer order deadlines. If we cannot deliver our systems in a timely manner, our revenues will likely suffer.

Our product sales depend in part upon manufacturing yields. We currently have limited manufacturing capacity and experience variability in manufacturing yields. We are currently manufacturing high-throughput instruments in-house, in limited volumes and with largely manual assembly. If demand for our high-throughput instruments increases, we will either need to expand our in-house manufacturing capabilities or outsource to other manufacturers. If we fail to deliver our products in a timely manner, our relationships with our customers could be seriously harmed, and our revenues could decline.

As we develop new products, we must transition the manufacture of a new product from the development stage to commercial manufacturing. We cannot predict whether we will be able to complete these transitions on a timely basis and with commercially reasonable costs. We cannot assure you that manufacturing or quality control problems will not arise as we attempt to scale-up our production for any future new products or that we can scale-up manufacturing and quality control in a timely manner or at commercially reasonable costs. If we are unable to consistently manufacture our products on a timely basis because of these or other factors, our product sales will decline.

IF WE DELIVER PRODUCTS WITH DEFECTS, OUR CREDIBILITY WILL BE HARMED AND THE SALES AND MARKET ACCEPTANCE OF OUR PRODUCTS WILL DECREASE.

Our products are complex and have at times contained errors, defects and bugs when introduced. If we deliver products with errors, defects or bugs, our credibility and the market acceptance and sales of our products would be harmed. Further, if our products contain errors, defects or bugs, we may be required to expend significant capital and resources to alleviate such problems. Defects could also lead to product liability as a result of product liability lawsuits against us or against our customers. We have agreed to indemnify our customers in some circumstances against liability arising from defects in our products. In the event of a successful product liability claim, we could be obligated to pay damages significantly in excess of our product liability insurance limits.

WE HAVE SIGNIFICANTLY EXPANDED OUR INTERNATIONAL OPERATIONS, WHICH EXPOSES US TO RISKS INHERENT IN INTERNATIONAL BUSINESS ACTIVITIES.

We maintain facilities in the United Kingdom, Germany, Norway, Japan and South Korea, and in July 2004, through our acquisition of Axon Instruments, we began operations in Australia. In addition to the increase in our international operations, we are also deriving an increasing portion of our revenues from customers located outside of the United States. Sales to customers outside of the United States accounted for approximately 42% our revenues in 2004, and we anticipate that international sales will continue to account for a significant portion of our revenues. A key aspect of our business strategy has been and is to expand our sales and support organizations internationally in order to take advantage of increasing international market opportunities resulting from worldwide growth in the life sciences industry.

Our reliance on international sales and operations exposes us to a number of risks associated with conducting operations internationally, including:

- political, social and economic instability;
- trade restrictions and changes in tariffs;
- the impact of business cycles and downturns in economies outside of the United States;
- unexpected changes in regulatory requirements that may limit our ability to export our products or sell into particular jurisdictions;
- import and export license requirements and restrictions;
- difficulties and costs of staffing, managing and monitoring geographically disparate operations;
- difficulties in maintaining effective communications with employees and customers due to distance, language and cultural barriers;
- disruptions in international transport or delivery;
- difficulties in protecting our intellectual property rights, particularly in countries where the laws and practices do not protect proprietary rights to as great an extent as do the laws and practices of the United States;
- difficulties in enforcing agreements through non-U.S. legal systems;
- longer payment cycles and difficulties in collecting receivables; and
- potentially adverse tax consequences.

If any of these risks materialize, our international sales could decrease and our foreign operations could suffer.

In addition, all of our sales to international distributors are denominated in U.S. dollars. Most of our direct sales in the United Kingdom, Germany, France, the Benelux, Canada, Japan and South Korea are denominated in local currencies and totaled $46.6 million (31% of total revenues) in 2004. To the extent that our sales and operating expenses are denominated in foreign currencies, our operating results may be adversely affected by changes in exchange rates. Historically, foreign exchange gains and losses have been immaterial to our results of operations. However, we cannot predict whether these gains and losses will continue to be immaterial, particularly as we increase our direct sales outside

North America. For example, we cannot predict whether other foreign exchange gains or losses in the future would have a material effect on our income. Owing to the number of currencies involved, the substantial volatility of currency exchange rates, and our constantly changing currency exposures, we cannot predict the effect of exchange rate fluctuations on our future operating results. We do not currently engage in foreign currency hedging transactions, but may do so in the future.

MOST OF OUR CURRENT AND POTENTIAL CUSTOMERS ARE FROM THE PHARMACEUTICAL AND BIOTECHNOLOGY INDUSTRIES AND ARE SUBJECT TO RISKS FACED BY THOSE INDUSTRIES.

We derive a significant portion of our revenues from sales to pharmaceutical and biotechnology companies. We expect that sales to pharmaceutical and biotechnology companies will continue to be a primary source of revenues for the foreseeable future. As a result, we are subject to risks and uncertainties that affect the pharmaceutical and biotechnology industries, such as availability of capital and reduction and delays in research and development expenditures by companies in these industries, pricing pressures as third-party payers continue challenging the pricing of medical products and services, government regulation, and the uncertainty resulting from technological change.

In addition, our future revenues may be adversely affected by the ongoing consolidation in the pharmaceutical and biotechnology industries, which would reduce the number of our potential customers. Furthermore, we cannot assure you that the pharmaceutical and biotechnology companies that are our customers will not develop their own competing products or in-house capabilities.

OUR PRODUCTS COULD INFRINGE ON THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS, WHICH MAY CAUSE US TO ENGAGE IN COSTLY LITIGATION AND, IF WE ARE NOT SUCCESSFUL, COULD ALSO CAUSE US TO PAY SUBSTANTIAL DAMAGES AND PROHIBIT US FROM SELLING OUR PRODUCTS.

Third parties may assert infringement or other intellectual property claims against us. We may have to pay substantial damages for infringement if it is ultimately determined that our products infringe a third party's proprietary rights. Further, any legal action against us could, in addition to subjecting us to potential liability for damages, prohibit us from selling our products before we obtain a license to do so from the party owning the intellectual property, which, if available at all, may require us to pay substantial royalties. Even if these claims are without merit, defending a lawsuit takes significant time, may be expensive and may divert management attention from other business concerns. There may be third-party patents that may relate to our technology or potential products. Any public announcements related to litigation or interference proceedings initiated or threatened against us could cause our stock price to decline. We believe that there may be significant litigation in the industry regarding patent and other intellectual property rights. If we become involved in litigation, it could consume a substantial portion of our managerial and financial resources.

WE MAY NEED TO INITIATE LAWSUITS TO PROTECT OR ENFORCE OUR PATENTS, WHICH WOULD BE EXPENSIVE AND, IF WE LOSE, MAY CAUSE US TO LOSE SOME OF OUR INTELLECTUAL PROPERTY RIGHTS, WHICH WOULD REDUCE OUR ABILITY TO COMPETE IN THE MARKET.

We rely on patents to protect a large part of our intellectual property and our competitive position. In order to protect or enforce our patent rights, we may initiate patent litigation against third parties, such as infringement suits or interference proceedings. Litigation may be necessary to:

- assert claims of infringement;
- enforce our patents;
- protect our trade secrets or know-how; or
- determine the enforceability, scope and validity of the proprietary rights of others.

Lawsuits could be expensive, take significant time and divert management's attention from other business concerns. They would put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing. We may also provoke third parties to assert claims against us. Patent law relating to the scope of claims in the technology fields in which we operate is still evolving and, consequently, patent positions in our industry are generally uncertain. If initiated, we cannot assure you that we would prevail in any of these suits or that the damages or other

remedies awarded, if any, would be commercially valuable. During the course of these suits, there could be public announcements of the results of hearings, motions and other interim proceedings or developments in the litigation. If securities analysts or investors were to perceive any of these results to be negative, our stock price could decline.

THE RIGHTS WE RELY UPON TO PROTECT OUR INTELLECTUAL PROPERTY UNDERLYING OUR PRODUCTS MAY NOT BE ADEQUATE, WHICH COULD ENABLE THIRD PARTIES TO USE OUR TECHNOLOGY AND WOULD REDUCE OUR ABILITY TO COMPETE IN THE MARKET.

Our success will depend in part on our ability to obtain commercially valuable patent claims and to protect our intellectual property. Our patent position is generally uncertain and involves complex legal and factual questions. Legal standards relating to the validity and scope of claims in our technology field are still evolving. Therefore, the degree of future protection for our proprietary rights is uncertain.

The risks and uncertainties that we face with respect to our patents and other proprietary rights include the following:

- the pending patent applications we have filed or to which we have exclusive rights may not result in issued patents or may take longer than we expect to result in issued patents;
- the claims of any patents which are issued may not provide meaningful protection;
- we may not be able to develop additional proprietary technologies that are patentable;
- the patents licensed or issued to us or our customers may not provide a competitive advantage;
- other companies may challenge patents licensed or issued to us or our customers;
- patents issued to other companies may harm our ability to do business;
- other companies may independently develop similar or alternative technologies or duplicate our technologies; and
- other companies may design around technologies we have licensed or developed.

In addition to patents, we rely on a combination of trade secrets, nondisclosure agreements and other contractual provisions and technical measures to protect our intellectual property rights. Nevertheless, these measures may not be adequate to safeguard the proprietary technology underlying our products. If these measures do not protect our rights, third parties could use our technology, and our ability to compete in the market would be reduced. In addition, employees, consultants and others who participate in the development of our products may breach their agreements with us regarding our intellectual property, and we may not have adequate remedies for the breach. We also may not be able to effectively protect our intellectual property rights in some foreign countries. For a variety of reasons, we may decide not to file for patent, copyright or trademark protection or prosecute potential infringements of our patents. We also realize that our trade secrets may become known through other means not currently foreseen by us. Notwithstanding our efforts to protect our intellectual property, our competitors may design around our proprietary technologies or may independently develop similar or alternative technologies or products that are equal or superior to our technology and products without infringing on any of our intellectual property rights.

WE MAY HAVE DIFFICULTY MANAGING OUR GROWTH.

We expect to experience significant growth in the number of our employees and customers and the scope of our operations, including as a result of potential acquisitions. This growth may continue to place a significant strain on our management and operations. Our ability to manage this growth will depend upon our ability to broaden our management team and our ability to attract, hire and retain skilled employees. Our success will also depend on the ability of our officers and key employees to continue to implement and improve our operational and other systems, to manage multiple, concurrent customer relationships and to hire, train and manage our employees. Our future success is heavily dependent upon growth and acceptance of new products. If we cannot scale our business appropriately or otherwise adapt to anticipated growth and new product introductions, a key part of our strategy may not be successful.

WE RELY UPON DISTRIBUTORS FOR PRODUCT SALES AND SUPPORT OUTSIDE NORTH AMERICA.

In 2004, approximately 13% of our sales were made through distributors. We often rely upon distributors to provide customer support to the ultimate end users of our products. As a result, our success depends on the continued sales and customer support efforts of our network of distributors. The use of distributors involves certain risks, including risks that distributors will not effectively sell or support our products, that they will be unable to satisfy financial obligations to us and that they will cease operations. Any reduction, delay or loss of orders from our significant distributors could harm our revenues. We also do not currently have distributors under contract in a number of significant international markets that we have targeted and will need to establish additional international distribution relationships. There can be no assurance that we will engage qualified distributors in a timely manner, and the failure to do so could have a material adverse affect on our business, financial condition and results of operations.

IF WE CHOOSE TO ACQUIRE NEW AND COMPLEMENTARY BUSINESSES, PRODUCTS OR TECHNOLOGIES INSTEAD OF DEVELOPING THEM OURSELVES, WE MAY BE UNABLE TO COMPLETE THESE ACQUISITIONS OR MAY NOT BE ABLE TO SUCCESSFULLY INTEGRATE AN ACQUIRED BUSINESS OR TECHNOLOGY IN A COST-EFFECTIVE AND NON-DISRUPTIVE MANNER.

Our success depends on our ability to continually enhance and broaden our product offerings in response to changing technologies, customer demands and competitive pressures. To this end, from time to time we have acquired complementary businesses, products or technologies instead of developing them ourselves, and we may choose to do so in the future. For example, we recently acquired Axon Instruments, Inc. and we acquired Universal Imaging Corporation in June 2002. We do not know if we will be able to complete any additional acquisitions, or whether we will be able to successfully integrate any acquired business, operate it profitably or retain its key employees. Integrating any business, product or technology we acquire, both in connection with the acquisition of Axon and other potential future acquisitions, involves considerable operational and financial risks and strains, including:

- the potential disruption of our ongoing business and distraction of our management;
- the potential strain on our financial and managerial controls and reporting systems and procedures;
- unanticipated expenses and potential delays related to integration of the operations, technology and other resources of acquired businesses;
- the impairment of relationships with employees, suppliers and customers as a result of any integration of new management personnel;
- greater than anticipated costs and expenses related to restructuring, including employee severance or relocation costs and costs related to vacating leased facilities; and
- potential unknown liabilities associated with any acquisition, including higher than expected integration costs, which may cause our quarterly and annual operating results to fluctuate.

We may not succeed in addressing these risks or any other problems encountered in connection with the acquisition of Axon or other potential future acquisitions. If we are unable to successfully integrate the operations, products, technology and personnel of acquired businesses in a timely manner or at all, or if we do achieve the perceived benefits of any acquisition as rapidly or to the extent anticipated by financial analysts or investors, the market price of our common stock could decline.

In addition, in order to finance any acquisitions, we might need to raise additional funds through public or private equity or debt financings. In that event, we could be forced to obtain financing on terms that are not favorable to us and, in the case of equity financing, that may result in dilution to our stockholders. In connection with the acquisition of Axon, we borrowed $30 million on our revolving credit facility in order to pay the cash portion of the merger consideration to be paid to Axon shareholders and optionholders. The revolving credit facility has no outstanding balance at December 31, 2004. While management believes that our cash flows will be more than adequate to service new debt, there may be circumstances in which required payments of principal and/or interest on new debt could adversely affect our cash flows and operating results, and therefore the market price of our common stock. In addition, any impairment of goodwill and

amortization of other intangible assets or charges resulting from the costs of acquisitions could harm our business and operating results.

DUE TO THE AXON ACQUISITION, MOLECULAR DEVICES IS A SUBSTANTIALLY LARGER AND MORE COMPLEX ORGANIZATION, AND IF MOLECULAR DEVICES' MANAGEMENT IS UNABLE TO SUFFICIENTLY MANAGE THE COMBINED COMPANY, ITS OPERATING RESULTS WILL SUFFER.

On July 1, 2004, Molecular Devices acquired a global business, which includes approximately 128 employees based at Axon's office in Union City, California and at its facilities in San Luis Obispo, California and Melbourne, Australia. The combined company continues to face challenges inherent in efficiently managing an increased number of employees over large geographic distances, including the need to implement appropriate systems, policies, benefits and compliance programs. The inability to successfully manage the substantially larger and internationally diverse organization, or any significant delay in achieving successful management, could have a material adverse effect on the combined company and, as a result, on the market price of Molecular Devices common stock.

THE ACQUISITION OF AXON COULD CAUSE US TO LOSE KEY PERSONNEL, WHICH COULD MATERIALLY AFFECT THE COMBINED COMPANY'S BUSINESS AND REQUIRE US TO INCUR SUBSTANTIAL COSTS TO RECRUIT REPLACEMENTS FOR LOST PERSONNEL.

As a result of the acquisition of Axon, our current and prospective employees could experience uncertainty about their future roles within Molecular Devices. This uncertainty may adversely affect our ability to attract and retain key management, sales, marketing and technical personnel. Any failure to attract and retain key personnel could have a material adverse effect on our business.

WE DEPEND ON OUR KEY PERSONNEL, THE LOSS OF WHOM WOULD IMPAIR OUR ABILITY TO COMPETE.

We are highly dependent on the principal members of our management, engineering and scientific staff. The loss of the service of any of these persons could seriously harm our product development and commercialization efforts. In addition, research, product development and commercialization will require additional skilled personnel in areas such as chemistry and biology, and software and electronic engineering. Our corporate headquarters are located in Sunnyvale, California, where demand for personnel with these skills is extremely high and is likely to remain high. As a result, competition for and retention of personnel, particularly for employees with technical expertise, is intense and the turnover rate for qualified personnel is high. If we are unable to hire, train and retain a sufficient number of qualified employees, our ability to conduct and expand our business could be seriously reduced. The inability to retain and hire qualified personnel could also hinder the planned expansion of our business.

CHANGES TO FINANCIAL ACCOUNTING STANDARDS MAY AFFECT OUR RESULTS OF OPERATIONS AND CAUSE US TO CHANGE OUR BUSINESS PRACTICES.

We prepare our financial statements to conform with U.S. generally accepted accounting principles. These accounting principles are subject to interpretation by the American Institute of Certified Public Accountants, the Securities and Exchange Commission and various bodies formed to interpret and create appropriate accounting principles. A change in those principles can have a significant effect on our reported results and may affect our reporting of transactions completed before a change is announced. Changes to those rules or the questioning of current practices may adversely affect our reported financial results or the way we conduct our business. For example, accounting principles affecting many aspects of our business, including rules relating to employee stock option grants, have recently been revised or are under review. The Financial Accounting Standards Board and other agencies have finalized changes to U.S. generally accepted accounting principles that will require us, starting in our third quarter of 2005, to record a charge to earnings for employee stock option grants and other equity incentives. We will have significant and ongoing accounting charges resulting from option grant and other equity incentive expensing that could reduce our overall net income. In addition, since we historically have used equity-related compensation as a component of our total employee compensation program, the accounting change could make the use of equity-related compensation less attractive to us and therefore make it more difficult to attract and retain employees. See Note 1 of the notes to our audited consolidated financial statements for a discussion of the impact on our financial results if we were to use the fair value method of accounting for equity awards to our employees.

OUR OPERATING RESULTS FLUCTUATE AND ANY FAILURE TO MEET FINANCIAL EXPECTATIONS MAY DISAPPOINT SECURITIES ANALYSTS OR INVESTORS AND RESULT IN A DECLINE IN OUR STOCK PRICE.

We have experienced and in the future may experience a shortfall in revenues or earnings or otherwise fail to meet public market expectations, which could materially and adversely affect our business and the market price of our common stock. Our total revenues and operating results may fluctuate significantly because of a number of factors, many of which are outside of our control. These factors include the following:

- customer confidence in the economy, evidenced, in part, by stock market levels;
- changes in the domestic and international economic, business and political conditions;
- economic conditions within the pharmaceutical and biotechnology industries;
- levels of product and price competition;
- the length of our sales cycle and customer buying patterns;
- the size and timing of individual transactions;
- the timing of new product introductions and product enhancements;
- the mix of products sold;
- levels of international transactions;
- activities of and acquisitions by competitors;
- the timing of new hires and the allocation of our resources;
- changes in foreign currency exchange rates;
- our ability to develop and market new products and control costs; and
- changes in U.S. generally accepted accounting principles

One or more of the foregoing factors may cause our operating expenses to be disproportionately high during any given period or may cause our revenues and operating results to fluctuate significantly. In particular, we typically experience a decrease in the level of sales in the first calendar quarter as compared to the fourth quarter of the preceding year because of budgetary and capital equipment purchasing patterns in the life sciences industry. Our quarterly operating results have fluctuated in the past, and we expect they will fluctuate in the future as a result of many factors, some of which are outside of our control.

In addition, we manufacture our products based on forecasted orders rather than on outstanding orders. Accordingly, our expense levels are based, in part, on expected future sales, and we generally cannot quickly adjust operating expenses. For example, research and development and general and administrative expenses are not directly affected by variations in revenues. As a result, if sales levels in a particular quarter do not meet expectations, we may not be able to adjust operating expenses in a sufficient timeframe to compensate for the shortfall, and our results of operations for that quarter may be seriously harmed. Likewise, our manufacturing processes may in certain instances create a risk of excess or inadequate inventory levels if orders do not match forecasts.

Based upon the preceding factors, we may experience a shortfall in revenues or earnings or otherwise fail to meet public market expectations, which could materially and adversely affect our business, financial condition, results of operations and the market price of our common stock. Because our revenues and operating results are difficult to predict, we believe that period-to-period comparisons of our results of operations are not a good indication of our future performance.

FAILURE TO MAINTAIN EFFECTIVE INTERNAL CONTROLS IN ACCORDANCE WITH SECTION 404 OF THE SARBANES-OXLEY ACT OF 2002 COULD HAVE A MATERIAL ADVERSE EFFECT ON OUR STOCK PRICE.

We have documented and tested our internal control procedures in order to satisfy the requirements of Section 404 of the Sarbanes-Oxley Act of 2002, which requires annual management assessments of the effectiveness of our internal control

over financial reporting and a report by our independent registered public accountants attesting to and reporting on these assessments. If we fail to maintain the adequacy of our internal control over financial reporting, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002. If we cannot favorably assess, or our independent registered public accountants are unable to provide an unqualified attestation report on our assessment of, the effectiveness of our internal control over financial reporting, investor confidence in the reliability of our financial reports may be adversely affected, which could have a material adverse effect on our stock price.

OUR STOCK PRICE IS VOLATILE, WHICH COULD CAUSE STOCKHOLDERS TO LOSE A SUBSTANTIAL PART OF THEIR INVESTMENT IN OUR STOCK.

The stock market in general, and the stock prices of technology companies in particular, have recently experienced volatility which has often been unrelated to the operating performance of any particular company or companies. In the year ended December 31, 2004, the closing sales price of our common stock ranged from $17.05 to $25.30. Our stock price could decline regardless of our actual operating performance, and stockholders could lose a substantial part of their investment as a result of industry or market-based fluctuations. In the past, our stock has traded relatively thinly. If a more active public market for our stock is not sustained, it may be difficult for stockholders to resell shares of our common stock. Because we do not anticipate paying cash dividends on our common stock for the foreseeable future, stockholders will not be able to receive a return on their shares unless they sell them.

The market price of our common stock will likely fluctuate in response to a number of factors, including the following:

- domestic and international economic, business and political conditions;
- economic conditions within the pharmaceutical and biotechnology industries;
- our failure to meet our performance estimates or the performance estimates of securities analysts;
- changes in financial estimates of our revenues and operating results by us or securities analysts;
- changes in buy/sell recommendations by securities analysts; and
- the timing of announcements by us or our competitors of significant products, contracts or acquisitions or publicity regarding actual or potential results or performance thereof.

PROVISIONS OF OUR CHARTER DOCUMENTS AND DELAWARE LAW MAY INHIBIT A TAKEOVER, WHICH COULD LIMIT THE PRICE INVESTORS MIGHT BE WILLING TO PAY IN THE FUTURE FOR OUR COMMON STOCK.

Provisions in our certificate of incorporation and bylaws may have the effect of delaying or preventing an acquisition, or merger in which we are not the surviving company or which results in changes in our management. For example, our certificate of incorporation gives our Board of Directors the authority to issue shares of preferred stock and to determine the price, rights, preferences and privileges and restrictions, including voting rights, of those shares without any further vote or action by our stockholders. The rights of the holders of common stock will be subject to, and may harmed by, the rights of the holders of any shares of preferred stock that may be issued in the future. The issuance of preferred stock may delay, defer or prevent a change in control, as the terms of the preferred stock that might be issued could potentially prohibit our consummation of any merger, reorganization, sale of substantially all of our assets, liquidation or other extraordinary corporate transaction without the approval of the holders of the outstanding shares of preferred stock. The issuance of preferred stock could also have a dilutive effect on our stockholders. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of the outstanding voting stock, from consummating a merger or combination involving us. Further, in October 2001, our Board of Directors adopted a stockholder rights plan, commonly known as a "poison pill." These provisions described above and our poison pill could limit the price that investors might be willing to pay in the future for our common stock.

OUR ACTUAL RESULTS COULD DIFFER MATERIALLY FROM THOSE ANTICIPATED IN OUR FORWARD-LOOKING STATEMENTS.

This report contains forward-looking statements within the meaning of the federal securities laws that relate to future events or our future financial performance. When used in this report, you can identify forward-looking statements by terminology such as "believes," "anticipates," "plans," "predicts," "expects," "estimates," "intends," "will," "continue," "may," "potential," "should" and similar expressions. These statements are only predictions. Our actual results could differ materially from those anticipated in our forward-looking statements as a result of many factors, including those set forth above and elsewhere in this report.

Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Neither we nor any other person assumes responsibility for the accuracy and completeness of these statements. We assume no duty to update any of the forward-looking statements after the date of this report or to conform these statements to actual results. Accordingly, we caution readers not to place undue reliance on these statements.

AVAILABLE INFORMATION

We make available, free of charge, on or through our Internet address located at www.moleculardevices.com our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file that material with, or furnish it to, the Securities and Exchange Commission. Materials we file with the SEC may be read and copied at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, D.C. 20549. This information may also be obtained by calling the SEC at 1-800-SEC-0330. The SEC also maintains an internet website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov. We will provide a copy of any of the foregoing documents to stockholders upon request.

Item 2. Properties

We lease two facilities in Sunnyvale, California, two in Union City, California, and one facility in Downingtown, Pennsylvania which include laboratory, manufacturing and administrative space. We also lease sales and service offices in the United Kingdom, Germany, Japan and South Korea, engineering facilities in San Luis Obispo, California and

Australia, and a manufacturing facility in Norway. We believe that our current facilities will be sufficient for our operations through at least 2005. These properties are described below:

LOCATION	OWNERSHIP	FACILITIES	LEASE EXPIRATION
1311 Orleans Drive Sunnyvale, CA 94089	Leased	Approximately 60,000 square feet of office and laboratory space	October 31, 2007
1312 Crossman Avenue Sunnyvale, CA 94089	Leased	Approximately 54,500 square feet of office, laboratory and manufacturing space	October 31, 2007
3280 Whipple Road Union City, CA 94587	Leased	Approximately 76,214 square feet of office, laboratory and manufacturing space	December 31, 2010
3250 Whipple Road Union City, CA 94587	Leased	Approximately 20,275 square feet of office space	December 31, 2010
1023 Nipomo Street San Luis Obispo, CA 93401	Leased	Approximately 2,000 square feet of office space	October 31, 2005
402 Boot Road Downingtown, PA 19335	Leased	Approximately 27,900 square feet of office, laboratory and manufacturing space	November 15, 2010
Oslo, Norway	Leased	Approximately 17,500 square feet of office and manufacturing space	January 1, 2007
Wokingham, England	Leased	Approximately 4,200 square feet of office space	August 20, 2009
Munich, Germany	Leased	Approximately 3,500 square feet of office space	October 31, 2006
Tokyo, Japan	Leased	Approximately 4,300 square feet of office space	June 30, 2005
Osaka, Japan	Leased	Approximately 3,700 square feet of office space	March 31, 2005
Seoul, South Korea	Leased	Approximately 2,100 square feet of office space	November 14, 2006
Melbourne, Australia	Leased	Approximately 5,000 square feet of office space	Month to Month

Item 3. Legal Proceedings

None.

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

None.

part II

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

MARKET INFORMATION

Our common stock is traded on the Nasdaq National Market under the symbol "MDCC."

The prices per share reflected on the table below represent the range of high and low closing sales prices of our common stock on the Nasdaq National Market, for the period indicated.

	2004		2003	
	HIGH	LOW	HIGH	LOW
First Quarter	$22.32	$17.64	$17.05	$10.97
Second Quarter	19.70	17.05	18.03	11.20
Third Quarter	24.82	17.85	20.31	15.51
Fourth Quarter	25.30	18.82	20.38	17.76

As of March 7, 2005, we had approximately 7,000 stockholders of record. On March 7, 2005, the last sale price reported on the Nasdaq National Market for our common stock was $19.99 per share.

DIVIDENDS

Historically, we have not paid cash dividends on our common stock and do not intend to pay any cash dividends in the foreseeable future. Our Board of Directors will determine any future cash dividends.

ISSUER PURCHASES OF EQUITY SECURITIES

The following table sets forth information regarding repurchases of our common stock pursuant to our stock repurchase program during the quarter ended December 31, 2004.

PERIOD	TOTAL NUMBER OF SHARES PURCHASED	AVERAGE PRICE PAID PER SHARE	TOTAL NUMBER OF SHARES PURCHASED AS PART OF PUBLICLY ANNOUNCED PROGRAMS	MAXIMUM NUMBER OF SHARES THAT MAY YET BE PURCHASED UNDER THE PROGRAMS
October 1, 2004 through October 31, 2004	—	—	—	—
November 1, 2004 through November 30, 2004	595,000	$20.99	595,000	575,000
December 1, 2004 through December 31, 2004	—	—	—	—
Total	595,000	$20.99	595,000	

On August 2, 2001, we announced that our Board of Directors had approved our current stock repurchase program, pursuant to which we were authorized and did repurchase 1,500,000 shares of our Common Stock. On October 25, 2001, our Board of Directors determined to continue the stock repurchase program and authorized the repurchase of an additional 1,500,000 shares of our Common Stock, all of which have since been repurchased. On July 29, 2004, our Board of Directors again determined to continue the stock repurchase program and authorized the repurchase of an additional 1,500,000 shares of our Common Stock. We have repurchased 1,322,000 shares of our Common Stock under this program, including 397,000 shares repurchased in February 2005 for approximately $8.4 million. On February 17, 2005, our Board of Directors again determined to continue the stock repurchase program and authorized the repurchase of an additional 1,500,000 shares of our Common Stock. In the event that all of such shares have been repurchased, our Board of Directors may again determine to continue our stock repurchase program and authorize management to repurchase additional shares of our Common Stock.

Item 6. Selected Consolidated Financial Data

The following table sets forth our selected historical financial information, certain portions of which are based on, and should be read in conjunction with, our audited consolidated financial statements that are being filed as a part of this report.

CONSOLIDATED STATEMENTS OF OPERATIONS DATA:

	YEARS ENDED DECEMBER 31,				
	2004	2003	2002	2001	2000
Revenues	$148,529	$115,581	$102,157	$92,231	$96,035
Cost of revenues	56,274	43,256	40,561	35,538	35,583
Gross profit	92,255	72,325	61,596	56,693	60,452
Operating expenses:					
Research and development	22,038	18,679	18,002	15,105	16,796
Selling, general and administrative	52,469	43,457	35,435	33,381	31,906
Acquired in-process research and development(1)	5,000	—	—	12,625	—
Restructuring charge(1)	1,157	—	—	—	—
Merger expenses(1)	—	—	—	—	15,181
Total operating expenses	80,664	62,136	53,437	61,111	63,883
Income (loss) from operations(1)	11,591	10,189	8,159	(4,418)	(3,431)
Gain on sale of equity securities	18,288	—	—	—	—
Interest expense	(187)	—	—	—	—
Interest and other income, net	319	872	1,562	3,806	4,912
Income (loss) before income taxes	30,011	11,061	9,721	(612)	1,481
Income tax provision	12,778	3,319	2,916	4,625	6,415
Net income (loss)	$ 17,233	$ 7,742	$ 6,805	$(5,237)	$(4,934)
Basic net income (loss) per share	$ 1.08	$ 0.51	$ 0.44	$ (0.32)	$ (0.32)
Diluted net income (loss) per share	$ 1.04	$ 0.51	$ 0.44	$ (0.32)	$ (0.32)
Shares used in computing basic net income (loss) per share	16,028	15,067	15,348	16,192	15,246
Shares used in computing diluted net income (loss) per share	16,532	15,179	15,457	16,192	15,246

CONSOLIDATED BALANCE SHEET DATA:

	AS OF DECEMBER 31,				
	2004	2003	2002	2001	2000
Cash, cash equivalents and short and long-term investments	$30,175	$60,110	$53,783	$67,257	$97,091
Working capital	67,556	87,305	84,851	99,422	138,184
Total assets	255,229	166,913	162,901	152,361	180,033
Long-term liabilities	6,776	—	—	—	269
Accumulated deficit	(8,873)	(26,106)	(33,848)	(40,653)	(4,833)
Total stockholders' equity	210,620	145,538	142,804	137,485	163,633

(1) Our 2004 income from operations included a $5.0 million write-off for the acquisition of in-process research and development costs and a $1.2 million charge related to restructuring, associated with the acquisition of Axon Instruments, Inc. Our 2001 loss from operations included a $12.6 million write-off for the acquisition of in-process research and development costs related to our acquisition of Cytion S.A. Our 2000 loss from operations included a $15.2 million charge related to direct costs incurred due to the merger with LJL BioSystems, which was accounted for as a pooling of interests.

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

OVERVIEW

Except for the historical information contained herein, the following discussion contains "forward-looking" statements. For this purpose, any statements that are not statements of historical fact may be deemed to be forward-looking statements. Words such as "believes," "anticipates," "plans," "predicts," "expects," "estimates," "intends," "will," "continue," "may," "potential," "should" and similar expressions are intended to identify forward-looking statements. There are a number of important factors that could cause our results to differ materially from those indicated by these forward-looking statements, including, among others, those discussed in this section as well as under Item 1 — "Business" and Item 7A — "Quantitative and Qualitative Disclosures About Market Risk" and the risks detailed from time to time in the Company's future SEC reports.

We are a leading supplier of high-performance bioanalytical measurement systems that accelerate and improve drug discovery and other life sciences research. Our systems and consumables enable pharmaceutical and biotechnology companies to leverage advances in genomics, proteomics and parallel chemistry by facilitating the high-throughput and cost-effective identification and evaluation of drug candidates. Our solutions are based on our advanced core technologies that integrate our expertise in engineering, molecular and cell biology, and chemistry. We enable our customers to improve research productivity and effectiveness, which ultimately accelerates the complex process of discovering and developing new drugs.

Our customers include leading pharmaceutical and biotechnology companies as well as medical centers, universities, government research laboratories and other institutions throughout the world. The success of our business is impacted by research and development spending trends of these customers, which has been unpredictable over the last three years and remains unpredictable in the near term. We focus on generating revenue growth through the development of innovative products for these customers. In each of the last four years, our internal research and development efforts have enabled us to exceed our goal of generating over 50% of annual revenues from products that are introduced in the last three years.

We divide our revenues into two product families based primarily on the customers to which they are sold. The drug discovery product family includes systems that integrate detection, liquid handling and automation, have price points in excess of $100,000, and are primarily sold to large pharmaceutical and biotechnology companies. Product lines included in the drug discovery family are FLIPR, Analyst, IonWorks, PatchXpress, ImageXpress and Discovery-1 systems. The life sciences product family, which includes bench-top detection, imaging software and liquid handling products, consists of the SpectraMax, MetaMorph, GenePix, Threshold, Skatron and Axopatch product lines. These single-purpose instruments generally cost less than $60,000 and are sold throughout our entire customer base. We recognize revenue on the sale of these products, when collectibility is reasonably assured, at the time of shipment and transfer of title to customers and distributors. There are no significant customer acceptance requirements or post shipment obligations on our part.

We are deriving an increasing portion of our revenues from overseas operations. Sales to customers outside of the United States accounted for 42% of total revenues in 2004, and 39% in 2003 and 2002. We currently have sales and services offices in the United Kingdom, Germany, Japan, and South Korea. In addition, we employ sales and service personnel in France, the Benelux, Scandinavia, Spain, Australia and China. Additional international sales are conducted through distributors around the world. We anticipate that international sales will account for an increasing percentage of revenues in the future, and we expect to continue expanding our international operations in order to take advantage of increasing international market opportunities. Our international business exposes us to a number of risks, including:

- political, social and economic instability;
- trade restrictions and changes in tariffs;
- the impact of business cycles and downturns in economies outside of the United States;
- unexpected changes in regulatory requirements that may limit our ability to export our products or sell into particular jurisdictions;
- import and export license requirements and restrictions;

- difficulties and costs of staffing, managing and monitoring geographically disparate operations;
- difficulties in maintaining effective communications with employees and customers due to distance, language and cultural barriers;
- disruptions in international transport or delivery;
- difficulties in protecting our intellectual property rights, particularly in countries where the laws and practices do not protect proprietary rights to as great an extent as do the laws and practices of the United States;
- difficulties in enforcing agreements through non-U.S. legal systems;
- longer payment cycles and difficulties in collecting receivables; and
- potentially adverse tax consequences.

On July 1, 2004, we acquired all of the outstanding capital stock of Axon Instruments, Inc. ("Axon"). This acquisition expands our product portfolio with systems for cellular neurosciences and genomics and combines complementary product lines in high-throughput imaging and electrophysiology. This acquisition did not cause us to create a new business segment.

The total cost of the acquisition was $139.9 million including cash and stock paid, options assumed, and direct transaction costs. As a result of the acquisition, we received $22.1 million in cash that had been on the balance sheet of Axon. The acquisition was accounted for under the purchase method of accounting. The results of operations of Axon have been included in the accompanying consolidated financial statements from the date of acquisition.

We allocated the purchase price based on the estimated fair value of the assets acquired and liabilities assumed. A valuation of the purchased intangible assets was undertaken by a third party valuation specialist to assist us in determining the estimated fair value of each identifiable asset and in allocating the purchase price among acquired assets, including the portion of the purchase price attributed to acquired in-process research and development projects. Projects that qualify as in-process research and development represent those that have not yet reached technological feasibility and which have no alternative use. Standard valuation procedures and techniques were utilized in determining the estimated fair value of the acquired in-process research and development. To determine the estimated fair value of the acquired in-process research and development, we considered, among other factors, the stage of development of each project, the time and resources needed to complete each project, and expected income and associated risks. Associated risks included the inherent difficulties and uncertainties in completing the project and thereby achieving technological feasibility, and the risks related to the viability of and potential changes to future target markets. The analysis resulted in $5.0 million of the purchase price being allocated to acquired in-process research and development and charged to earnings, using discount rates ranging from 27% to 32%. The in-process research and development acquired from Axon consists of projects related to the PatchXpress and ImageXpress product development initiatives. We estimated that the in-process projects related to each of these products varied from 62% to 75% complete, based on research and development complexity, costs and time expended to date relative to the expected remaining costs and time to reach technological feasibility.

The value assigned to acquired in-process research and development was determined by considering the importance of each project to the overall development plan, estimating costs to develop the purchased in-process research and development into commercially viable products, estimating the resulting net cash flows from the projects when completed and discounting the net cash flows to their present value. The revenue estimates used to value the acquired in-process research and development were based on estimates of relevant market sizes and growth factors, expected trends in technology and the nature and expected timing of new product introductions by Axon and its competitors. The rates utilized to discount the net cash flows to their present value were based on Axon's weighted average cost of capital. The weighted average cost of capital was adjusted to reflect the difficulties and uncertainties in completing each project and thereby achieving technological feasibility, the percentage of completion of each project, anticipated market acceptance and penetration, and market growth rates and risks related to the impact of potential changes in future target markets.

CRITICAL ACCOUNTING POLICIES

Management's discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. On an ongoing basis, management evaluates its estimates, including those related to revenue recognition, bad debts, inventories, intangible assets, equity investments, income taxes and warranty obligations. Management bases its estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our consolidated financial statements:

Revenue Recognition

We apply the provisions of the following authoritative literature in the development of our revenue recognition policies:

- Emerging Issues Task Force ("EITF"), Issue No. 00-21, *"Revenue Arrangements with Multiple Deliverables."* Revenue arrangements with multiple elements are divided into separate units of accounting if the deliverables in the arrangement have value to the customer on a stand alone basis, there is objective and reliable evidence of the fair value of the undelivered elements and there are no rights of return or additional performance guarantees by us.

- Statement of Position 97-2, *"Software Revenue Recognition."* Revenue earned on software arrangements involving multiple elements is allocated to each element based on the relative fair values of the elements as determined by means of our quoting process and published price lists.

- Staff Accounting Bulletin ("SAB") No. 101, *"Revenue Recognition in Financial Statements"* (as amended by SAB 104). Revenue is recognized when the following four criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price is fixed or determinable; and (4) collectibility is reasonably assured.

A majority of our revenue is derived from the sale of instruments to end-users with a one-year warranty. These arrangements include a single element (the instrument). Other single-element arrangements include the sale of consumables, software, service, installation or training. Arrangements incorporating multiple elements may exist, either through one invoice or through separate invoices entered into with a single customer at or near the same time. These multiple-element arrangements can include any combination of the previously described products or services.

All single-element and multiple-element arrangements are evidenced by an invoice in response to a written purchase order. Each element of an arrangement is invoiced at fair value as determined by means of our quoting process and published price lists. Standard end-user terms include: risk of loss transferring to the purchaser at the time of shipment, net 30 day payment terms, no right of return or exchange, no right to upgrades and no acceptance provisions.

We do not enter into arrangements that require performance in excess of our published specifications.

Warranty

Future warranty costs are estimated based on historical experience and provided for at the time of sale.

Accounts Receivable

We sell our products primarily to corporations, academic institutions, government entities and distributors within the drug discovery and life sciences research markets. We perform ongoing credit evaluations of our customers and generally do not require collateral. We provide reserves against trade receivables for estimated losses that may result from customers' inability to pay. The amount of the reserve is determined by analyzing known uncollectible accounts, aged receivables, economic conditions in the customers' country or industry, historical losses and customer credit-worthiness. Amounts later determined and specifically identified to be uncollectible are charged or written off against the reserve. Estimated losses have historically been within our expectations.

Inventories

Inventories are stated on a first-in, first-out basis at the lower of cost or market. We write down our inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those we project, additional inventory write-downs may be required. Such write-downs have historically been within our expectations.

Goodwill and Other Intangible Assets

Our business acquisitions have resulted in goodwill and other intangible assets, and the recorded value of those assets may become impaired in the future. As of December 31, 2004, our goodwill and intangible assets, net of accumulated amortization, were $104.2 million, and $30.3 million, respectively. The determination of the value of such assets requires management to make estimates and assumptions that affect our consolidated financial statements. We perform our goodwill impairment tests annually and more frequently if an event or circumstance indicates that impairment has occurred. We assess potential impairments to other intangible assets when there is evidence that events or changes in circumstances indicate that the carrying amount of an asset may not be recovered. Our judgments regarding the existence of impairment indicators and future cash flows related to intangible assets are based on operational performance of our business, market condition and other factors. Although there are inherent uncertainties in this assessment process, the estimates and assumptions we use are consistent with our internal planning. If these estimates or their related assumptions change in the future, we may be required to record an impairment charge on all of a portion of our goodwill and intangible assets. Furthermore, we cannot predict the occurrence of future impairment-triggering events nor the impact such events might have on our reported asset values. Future events could cause us to conclude that impairment indicators exist and that goodwill or other intangible assets associated with our acquired businesses is impaired. Any resulting impairment loss could have an adverse impact on our results of operations.

Equity Investments

We invest in equity instruments of privately held companies for business and strategic purposes. These investments are included in intangible and other assets and are accounted for under the cost method when ownership is less than 20 percent of voting securities and we do not have the ability to exercise significant influence over operations. When our ownership exceeds 20 percent of voting securities but is less than 50 percent, or we have the ability to exercise significant influence, the investment is accounted for under the equity method. Under the equity method, the investee's proportionate share of net income or loss and amortization of the investee's net excess investment over its equity in net assets is included in net income or loss. As of December 31, 2004, we did not hold any investments accounted for under the equity method. We regularly review the assumptions underlying the operating performance and cash flow forecasts in assessing the fair values. We monitor the preceding factors to identify events or circumstances that would cause us to test for other than temporary impairment and revise our assumptions for the estimated recovery of equity investments.

Income Taxes

Income taxes are accounted for under the liability method whereby deferred tax asset or liability account balances are calculated at the balance sheet date using current tax laws and rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized in the future.

At December 31, 2004, we had net deferred tax assets of $4.4 million. Realization of these assets is dependent on our ability to generate significant future taxable income. We believe that sufficient income will be earned in the future to realize these assets. We will evaluate the realizability of the deferred tax assets and assess the need for valuation allowances periodically.

Various factors may have favorable or unfavorable effects upon our effective tax rate in the future. These factors include, but are not limited to, interpretations of existing tax laws, changes in tax laws and rates, future levels of research and development spending, future levels of capital expenditures, international operations and our success in research and development and commercializing products.

RESULTS OF OPERATIONS

The following table summarizes our consolidated statements of operations as a percentage of revenues:

	YEARS ENDED DECEMBER 31,		
	2004	2003	2002
Revenues	100.0%	100.0%	100.0%
Cost of revenues	37.9	37.4	39.7
Gross profit	62.1	62.6	60.3
Research and development	14.8	16.2	17.6
Selling, general and administrative	35.3	37.6	34.7
Acquired in-process research and development	3.4	—	—
Restructuring charge	0.8	—	—
Income from operations	7.8	8.8	8.0
Gain on sale of equity securities	12.3	—	—
Interest expense	(0.1)	—	—
Interest and other income, net	0.2	0.8	1.5
Income before income taxes	20.2	9.6	9.5
Income tax provision	8.6	2.9	2.8
Net income	11.6%	6.7%	6.7%

Years Ended December 31, 2004 and 2003

REVENUES. Revenues in 2004 increased by 29% to $148.5 million from $115.6 million in 2003. Drug discovery product family revenues in 2004 increased by 19% compared to 2003, and represented 41% of total revenue. Life sciences research product family revenues in 2004 increased by 37% compared to 2003, and represented 59% of total revenue. The $32.9 million increase in revenue was due to $26.3 million of sales of our acquired Axon product lines, including PatchXpress, ImageXpress, cellular neurosciences and genomics and $7.6 million in growth in life sciences research products driven by our SpectraMax products including our SpectraMax M2 and newly released SpectraMax M5, partially offset by declines in drug discovery of $1.0 million caused by decreases in Analyst sales and offsetting increases in IonWorks and FLIPR.

GROSS MARGIN. Gross margin remained stable at 62.1% in 2004 versus 62.6% in 2003.

RESEARCH AND DEVELOPMENT EXPENSE. Research and development expenses in 2004 increased by 18% to $22.0 million from $18.7 million in 2003. This increase consisted of $4.4 million of salary, benefits and other expenses of the acquired Axon research and development activities, and $600,000 of consulting costs for our IonWorks product line, partially offset by a decrease of $1.7 million in legal expenses incurred in 2003 associated with the settlement of a patent infringement lawsuit.

SELLING, GENERAL AND ADMINISTRATIVE EXPENSE. Selling, general and administrative expenses in 2004 increased by 21% to $52.5 million from $43.5 million in 2003. This increase was due to $4.1 million of salary and related expenses due to increased sales headcount worldwide; $3.4 million of salary, benefits, facility and other expenses of the acquired Axon selling, general and administrative activities; $1.5 million of costs associated with Sarbanes-Oxley Section 404 compliance; and increased amortization of $800,000 for the intangible assets acquired from Axon. These increases were offset by an $800,000 decrease in service and warranty costs.

ACQUIRED IN-PROCESS RESEARCH AND DEVELOPMENT. In 2004, a $5.0 million write-off of in-process research and development occurred in conjunction with the acquisition of Axon. There was no similar write-off in 2003.

RESTRUCTURING CHARGE. In conjunction with the acquisition of Axon, we implemented an integration plan which included the termination of Axon and Molecular Devices employees, the relocation or transfer to other sites of employees and the closure of duplicate facilities. Termination costs related to Molecular Devices employees totaled $1.2 million and have been expensed as a restructuring charge. There were no similar restructuring charges in 2003.

GAIN ON SALE OF EQUITY SECURITIES. In October 2004, Serologicals Corporation ("Serologicals") purchased Upstate Group, Inc. ("Upstate"), a privately-held company in which we held an equity interest. As a result of the acquisition, we received cash and shares of common stock in Serologicals. Subsequently, we disposed of our entire equity interest in Serologicals. The net gain as a result of these transactions was $18.3 million, which is reported as gain on sale of equity securities in the Consolidated Statements of Income. There was no similar gain in 2003.

INTEREST EXPENSE. We incurred $187,000 in interest expense on our revolving credit facility entered into to finance our acquisition of Axon.

INTEREST AND OTHER INCOME, NET. Other income, net decreased in 2004 by 63% to $319,000 from $872,000 in 2003. Of this decrease, approximately $370,000 was due to the unfavorable impact of foreign exchange rates and the remainder was due to a decrease in interest income due to lower cash and investment balances.

INCOME TAX PROVISION. We recorded tax provisions of $12.8 million (an effective tax rate of 43%) and $3.3 million (an effective tax rate of 30%) for 2004 and 2003, respectively. The increase in our effective tax rate was due to an inability to recognize a tax benefit for acquired in-process research and development and an increase in foreign tax expense. The effective tax rates for 2004 and 2003 are calculated on profit before tax.

Years ended December 31, 2003 and 2002

REVENUES. Revenues in 2003 increased by 13% to $115.6 million from $102.2 million in 2002. Drug discovery product family revenues in 2003 increased by 13% compared to 2002, and represented 45% of total revenue. Life sciences research revenues in 2003 increased by 13% compared to 2002, and represented 55% of total revenue. The $13.4 million in increased revenue was due to $8.1 million of sales of our product lines acquired from UIC in June 2002, $4.2 million of growth in drug discovery primarily attributed to our FLIPR and IonWorks product lines, and $1.1 million of growth in life sciences research, primarily SpectraMax products.

GROSS MARGIN. Gross margin increased to 62.6% in 2003, from 60.3% in 2002. This increase was primarily due to the increased sales of higher margin products, including IonWorks HT, MetaMorph, Discovery-1 systems, as well as consumable products.

RESEARCH AND DEVELOPMENT EXPENSE. Research and development expenses remained relatively stable in 2003, increasing 4% to $18.7 million, from $18.0 million in 2002. This increase was due to: a decrease of $2.4 million due to the closure of our Swiss facilities, offset by increases of $800,000 due to a full year of research and development expenses at UIC, $1.3 million in legal expenses associated with the settlement of a patent infringement lawsuit and $1.0 million for continued funding of development programs related to IonWorks, FLIPR and SpectraMax products.

SELLING, GENERAL AND ADMINISTRATIVE EXPENSE. Selling, general and administrative expenses increased by 23% to $43.5 million in 2003 from $35.4 million in 2002. The increase of $8.1 million was due to the following cost increases incurred as a result of including a full year of UIC expenses and increased headcount from the UIC acquisition and within the sales organization: $5.6 million of increased salary, facility and related expenses, $1.6 million of additional sales and service costs, $700,000 of additional consulting, audit and legal fees, and $200,000 of other charges.

INTEREST AND OTHER INCOME, NET. Other income, net, consisting primarily of interest income and foreign exchange gains and losses, decreased by 44% to $872,000 in 2003 from $1.6 million in 2002. This was due to lower interest rates received on our cash and investments portfolio in 2003, resulting in an approximately $500,000 decrease in interest income, with the remainder due to the impact of foreign exchange rates.

INCOME TAX PROVISION. We recorded tax provisions of $3.3 million (an effective tax rate of 30%) and $2.9 million (an effective tax rate of 30%) for 2003 and 2002, respectively. The stability in our effective tax rate resulted from tax benefits recognized in 2003 associated with our international operations offset by a reduction in federal and state research and development credits. The effective tax rates for 2003 and 2002 are calculated on profit before tax.

LIQUIDITY AND CAPITAL RESOURCES

As of December 31, 2004 we had $30.2 million in cash, cash equivalents and short-term and long-term investments compared to $60.1 million and $53.8 million as of December 31, 2003 and December 31, 2002, respectively.

On July 1, 2004, we acquired all of the outstanding capital stock of Axon. In connection with the acquisition of Axon, we entered into a new senior unsecured credit facility with Union Bank of California, N.A., which provides us with a revolving credit facility in the amount of up to $30.0 million. The revolving credit facility is guaranteed by our domestic subsidiaries. All loans outstanding under the senior unsecured credit facility will bear interest at a rate per annum equal to, at our option, either the base rate plus 0.50% or the London InterBank Offered Rate (LIBOR) plus 1.25%. The revolving credit facility may be drawn, paid and reborrowed at our option, and matures on July 1, 2007. We initially used $15.0 million of this credit facility to partially finance the cash portion of the merger consideration paid to Axon shareholders and certain optionholders. The $15.0 million drawdown was repaid and the revolving credit facility had no outstanding balance as of December 31, 2004.

Net cash provided by operating activities was $23.1 million for the year ended December 31, 2004, compared to $18.7 million for the year ended December 31, 2003, and $15.3 million for the year ended December 31, 2002. The cash provided during 2004 was primarily the result of net income of $17.2 million plus net non-cash charges of $2.8 million and net changes in operating assets and liabilities of $3.1 million. The non-cash charges included depreciation and amortization of $7.2 million, a $5.0 million charge for acquired in-process research and development, $4.3 million of decreases in deferred tax assets, and $3.9 million of tax benefits realized as a result of employee stock option exercises, offset by $18.3 million from the sale of equity securities.

Net cash used in investing activities was $16.8 million for the year ended December 31, 2004, compared to $3.5 million and $24.8 million for the years ended December 31, 2003 and 2002, respectively. The increase between 2003 and 2004 was primarily due to $48.5 million used to acquire Axon, net of cash received. Offsetting this cash used by investing activities, we received $9.9 million upon the sale of investments and received $28.3 million from the sale of our equity investment in Upstate. Additional cash used in investing activities included the purchase of property and equipment for $4.8 million.

Net cash used in financing activities was $27.5 million in 2004, compared to $9.0 million and $3.7 million in 2003 and 2002, respectively. The increase between 2003 and 2004 was due to $31.6 million spent to repurchase 1,555,000 shares of our common stock, offset by $4.1 million of proceeds from the issuance of common stock for options exercised and employee stock purchases. The share repurchases occurred throughout 2004, and accounted for approximately 9.1% of the shares of our common stock outstanding as of December 31, 2004. Approximately 575,000 shares remained available for repurchase at December 31, 2004 under the stock repurchase program initially approved by our Board of Directors in August 2001. In February 2005, we repurchased 397,000 shares of our common stock for approximately $8.4 million under our stock repurchase program. On February 17, 2005, our Board of Directors again determined to continue the stock repurchase program and authorized the repurchase of an additional 1,500,000 shares of our Common Stock.

We believe that our existing cash and anticipated cash flow from our operations will be sufficient to support our current operating plan for the foreseeable future. Our ability to generate our anticipated cash flow from operations is subject to the risks and uncertainties discussed above under Item 1 — "Business" including, in particular, variations in the amount of time it takes for us to sell our products and collect accounts receivable, the timing of customer orders, competition, risks associated with the pharmaceutical and biotechnology industries, supplier or manufacturing problems or delays, and risks associated with past and potential future acquisitions.

Likewise, our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement that involves risks and uncertainties, and actual results could vary as a result of a number of factors. We have based this estimate on our current plans which may change and assumptions that may prove to be wrong. Our future capital requirements will depend on many factors, including:

- the progress of our research and development;
- the number and scope of our research and development programs;
- market acceptance and demand for our products;
- the costs that may be involved in enforcing our patent claims and other intellectual property rights;

- potential acquisition and technology licensing opportunities;
- the costs associated with repurchasing shares of our common stock;
- manufacturing capacity requirements; and
- the costs of expanding our sales, marketing and distribution capabilities both in the United States and abroad.

We have generated sufficient cash flow to fund our capital requirements primarily through operating and financing activities over the last three years. However, we cannot assure you that we will not require additional financing in the future to support our existing operations or potential acquisition and technology licensing opportunities that may arise. Therefore, we may in the future seek to raise additional funds through bank facilities, debt or equity offerings or other sources of capital. Additional financing may not be available on favorable terms or at all, and may be dilutive to our then-current stockholders.

Our cash and investments policy emphasizes liquidity and preservation of principal over other portfolio considerations. We select investments that maximize interest income to the extent possible given these two constraints. We satisfy liquidity requirements by investing excess cash in securities with different maturities to match projected cash needs and limit concentration of credit risk by diversifying our investments among a variety of high credit-quality issuers. We believe that our existing cash and investment securities and anticipated cash flow from our operations will be sufficient to support our current operating plan for the foreseeable future.

CONTRACTUAL OBLIGATIONS

Our facilities are leased under noncancelable operating leases. In addition, we have contractual commitments for the purchase of products, components and services ending in 2005. As of December 31, 2004, the following is a summary of our contractual obligations (in millions):

	PAYMENTS DUE BY PERIOD				
	Total	2005	2006 to 2007	2008 to 2009	2010 and thereafter
Operating leases	$27.6	$ 7.1	$13.3	$4.8	$2.4
Unconditional purchase obligations	12.7	12.7	—	—	—
Total contractual cash obligations	$40.3	$19.8	$13.3	$4.8	$2.4

RECENT ACCOUNTING PRONOUNCEMENT

In December 2004, the FASB issued Statement No. 123 (revised 2004), *"Share-Based Payment"* ("FAS 123R") which is a revision of FASB Statement No. 123, *"Accounting for Stock-Based Compensation"* ("FAS 123"), and supercedes APB Opinion No. 25, *"Accounting for Stock Issued to Employees"* ("APB Opinion 25"). FAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the financial statements based on their fair values, beginning with the first interim or annual period after June 15, 2005, with early adoption encouraged. The pro forma disclosures previously permitted under FAS 123 will no longer be an alternative to financial statement recognition. We are required to adopt FAS 123R in our third quarter of fiscal 2005, beginning July 1, 2005. Under FAS 123R, we must determine the appropriate fair value model to be used for valuing share-based payments, the amortization method for compensation cost and the transition method to be used at date of adoption. The transition methods include modified prospective and modified retrospective adoption options. Under the modified prospective method, compensation cost is recognized beginning with the effective date (a) based on the requirements of FAS 123R for all share-based payments granted after the effective date and (b) based on the requirements of FAS 123 for all awards granted to employees prior to the effective date of FAS 123R that remain unvested on the effective date. The modified retrospective method includes the requirements of the modified prospective method described above, but also permits entities to restate based on the amounts previously recognized under Statement 123 for purposes of pro forma disclosures, either (a) all prior periods presented or (b) prior interim periods of the year of adoption. As permitted by FAS 123, we currently account for share-based payments to employees using APB Opinion 25's intrinsic value method and, as such, recognize no compensation cost for employee stock options. Although expected to be material, we cannot predict the impact of adoption of FAS 123R at this time because it will depend on levels of share-based payments granted in the future. However, had we adopted FAS 123R in prior periods, the impact of that standard would have

approximated the impact of FAS 123 as described in the disclosure of pro forma net income and earnings per share in Note 1 to our consolidated financial statements. FAS 123R also requires the benefits of tax deductions in excess of recognized compensation cost to be reported as a financing cash flow, rather than as an operating cash flow as required under current literature. This requirement will reduce net operating cash flows and increase net financing cash flows in periods after adoption. While we cannot estimate what those amounts will be in the future (because they depend on, among other things, when employees exercise stock options), the amount of operating cash flows recognized in prior periods for such excess tax deductions were $3.9 million, $1.9 million and $0 in 2004, 2003 and 2002, respectively.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk, including changes in interest rates and foreign currency exchange rates. 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. A discussion of our accounting policies for financial instruments and further disclosures relating to financial investments is included in the Summary of Significant Accounting Policies note in the Notes to our Consolidated Financial Statements included in this report.

FOREIGN CURRENCY EXCHANGE

We are exposed to changes in foreign currency exchange rates primarily in the United Kingdom, Germany, France, the Benelux, Canada, Japan and South Korea, where we sell our products directly in local currencies. All other foreign sales are denominated in U.S. dollars and bear no exchange rate risk. However, a strengthening of the U.S. dollar could make our products less competitive in overseas markets. Gains and losses resulting from foreign currency transactions have historically been immaterial. A sensitivity analysis assuming a hypothetical 10% movement in exchange rates applied to our projected foreign sales for the fiscal year 2005, indicated that such movement would not have a material effect on our business, operating results or financial condition. Translation gains and losses related to our foreign subsidiaries in the United Kingdom, Germany, Norway, Switzerland, Japan, South Korea and Australia are accumulated as a separate component of stockholders' equity. We do not currently engage in foreign currency hedging transactions, but may do so in the future.

INTEREST AND INVESTMENT INCOME

Our interest and investment income is subject to changes in the general level of interest rates, primarily U.S. interest rates. In this regard, changes in U.S. interest rates affect the interest earned on our cash equivalents and short-term investments. We invest our excess cash primarily in demand deposits with United States banks and money market accounts and short-term securities. These securities are carried at market value, which approximate cost, typically mature or are redeemable within 90 days to two years, and bear minimal risk. We have not experienced any significant losses on the investments. A sensitivity analysis assuming a hypothetical 10% movement in interest rates applied to our investment balances at December 31, 2004 indicated that such market movement would not have a material effect on our business, operating results or financial condition. Actual gains or losses in the future may differ materially from this analysis, depending upon actual balances and changes in the timing and amount of interest rate movements.

DEBT AND INTEREST EXPENSE

In connection with the acquisition of Axon, we entered into a new senior unsecured credit facility with Union Bank of California, N.A., which provides us with a revolving credit facility in the amount of up to $30.0 million. The revolving credit facility is guaranteed by our domestic subsidiaries. All loans outstanding under the senior unsecured credit facility will bear interest at a rate per annum equal to, at our option, either the base rate plus 0.50% or LIBOR plus 1.25%. A sensitivity analysis assuming a hypothetical 10% movement in interest rates applied to our debt balance at December 31, 2004, indicated that such market movement would not have a material effect on our business, operating results or financial condition, as there was no balance outstanding at year end. Actual gains or losses in the future may differ materially from this analysis, depending on the level of our outstanding debt and changes in the timing and amount of interest rate movements.

Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements and financial statement schedules as listed below are attached to this report as pages 41 through 66.

Financial Statements:

- Reports of Independent Registered Public Accounting Firm;
- Consolidated Balance Sheets as of December 31, 2004 and 2003;
- Consolidated Statements of Income for each of the three years in the period ended December 31, 2004;
- Consolidated Statements of Stockholders' Equity for each of the three years in the period ended December 31, 2004;
- Consolidated Statements of Cash Flows for each of the three years in the period ended December 31, 2004; and
- Notes to Consolidated Financial Statements.

Financial Statement Schedules:

Schedule II — Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable or the required information is shown in the consolidated financial statements or notes thereto.

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

None

Item 9A. Controls and Procedures

EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

Based on our management's evaluation (with the participation of our chief executive officer and chief financial officer), as of the end of the period covered by this report, our chief executive officer and chief financial officer have concluded that our disclosure controls and procedures (as defined in Securities Exchange Act Rules 13a-15(e) and 15d-15(e)) are effective to ensure that the information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There was no change in our internal control over financial reporting during our fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a — 15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2004 based on the framework in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on our evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2004.

Our management's assessment of the effectiveness of our internal control over financial reporting as of December 31, 2004 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report which is included elsewhere herein.

Item 9B. Other Information

None.

part III

Item 10. Directors and Executive Officers of the Registrant

IDENTIFICATION OF DIRECTORS AND EXECUTIVE OFFICERS

Information with respect to Directors and Executive Officers may be found in the sections entitled "Proposal 1 — Election of Directors," and "Executive Officers of the Company," respectively, appearing in the definitive Proxy Statement to be filed with the Securities and Exchange Commission and delivered to stockholders in connection with the solicitation of proxies for our Annual Meeting of Stockholders to be held on May 26, 2005 (the "Proxy Statement"). Such information is incorporated herein by reference.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

The information required by this Item is set forth in the Proxy Statement under the heading "Section 16(a) Beneficial Ownership Reporting Compliance," which information is incorporated herein by reference.

CODE OF CONDUCT

We have adopted the Molecular Devices Corporation Code of Conduct that applies to all officers, directors and employees. The Code of Conduct is available in the Corporate Governance section of the Investor Relations section of our website at www.moleculardevices.com. We intend to satisfy the disclosure requirements under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of the Code of Conduct by posting such information on our website at the address specified above.

Item 11. Executive Compensation

The information required by this Item is set forth in the Proxy Statement under the heading "Executive Compensation," which information is incorporated herein by reference.

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

The information required by this Item is set forth in the Proxy Statement under the heading "Security Ownership of Certain Beneficial Owners and Management," which information is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions

The information required by this Item is set forth in the Proxy Statement under the heading "Certain Transactions," which information is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information required by this Item is incorporated herein by reference from the section captioned "Ratification of Independent Registered Public Accounting Firm" contained in the Proxy Statement.

Consistent with Section 10A(i)(2) of the Securities Exchange Act of 1934, as added by Section 202 of the Sarbanes-Oxley Act of 2002, we are responsible for listing the non-audit services approved by our Audit Committee to be performed by Ernst & Young LLP, our Independent Registered Public Accounting Firm. Non-audit services are defined as services other than those provided in connection with an audit or a review of our financial statements. Our Audit Committee currently has approved the engagement of Ernst & Young to perform up to $20,000 in non-audit services in 2005.

part IV

Item 15. Exhibits and Financial Statement Schedules

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

1. Financial Statements — See Index to Consolidated Financial Statements as Item 8 on page 33 of this report.
2. Financial Statement Schedule — See Index to Consolidated Financial Statements as Item 8 on page 33 of this report.

(b) Exhibits:

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
2.1(1)	Form of Agreement and Plan of Merger between the Registrant and Molecular Devices Corporation, a California Corporation
2.2(2)	Stock and Asset Purchase Agreement, dated as of May 17, 1999, among Molecular Devices Corporation, a Delaware corporation, Helge Skare, Wiel Skare, Steinar Faanes and Sten Skare, each an individual resident in Norway, Skatron Instruments AS, a Norwegian company, and Skatron Instruments, Inc., a Virginia corporation
2.4(5)	Agreement and Plan of Merger and Reorganization dated as of June 7, 2000 by and among Molecular Devices Corporation, Mercury Acquisition Sub, Inc. and LJL BioSystems, Inc.
2.5(11)	Stock Purchase Agreement dated as of November 14, 2000 by and among JCR Pharmaceuticals, K.K. and Molecular Devices Corporation
2.6(12)	Stock Purchase Agreement dated as of July 6, 2001 by and among Molecular Devices, Cytion S.A., Jean-Pierre Rosat (as agent for the stockholders of Cytion) and each of the stockholders of Cytion
2.7(13)	Stock Purchase Agreement dated as of June 1, 2002 by and among Molecular Devices, Universal Imaging Corporation, Theodore Inoue (as agent for the stockholders of Universal Imaging Corporation) and each of the stockholders of Universal Imaging Corporation
2.8(15)	Agreement and Plan of Merger and Reorganization, dated as of March 20, 2004, by and among Molecular Devices Corporation, Astros Acquisition Sub I, Inc., Astros Acquisition Sub II, LLC and Axon Instruments, Inc.
2.9(16)	Amendment to Agreement and Plan of Merger and Reorganization, dated as of May 21, 2004, by and among Molecular Devices Corporation, Astros Acquisition Sub I, Inc., Astros Acquisition Sub II, LLC and Axon Instruments, Inc.
3.1(1)	Amended and Restated Certificate of Incorporation of Registrant
3.2(1)	Bylaws of the Registrant
3.3(8)	Certificate of Amendment to Certificate of Incorporation
4.1(1)	Specimen Certificate of Common Stock of Registrant
10.1(1)*	1988 Stock Option Plan
10.2(1)*	Form of Incentive Stock Option under the 1988 Stock Option Plan
10.3(1)*	Form of Supplemental Stock Option under the 1988 Stock Option Plan
10.4(8)*	1995 Employee Stock Purchase Plan
10.6(1)*	Form of Nonstatutory Stock Option under the 1995 Non-Employee Directors' Stock Option Plan
10.8(1)*	Form of Incentive Stock Option under the 1995 Stock Option Plan
10.9(1)*	Form of Nonstatutory Stock Option under the 1995 Stock Option Plan
10.10(1)*	Form of Early Exercise Stock Purchase Agreement under the 1995 Stock Option Plan
10.11(1)*	Form of Indemnity Agreement between the Registrant and its Directors and Executive Officers
10.19(17)*	Amended Key Employee Agreement for Joseph D. Keegan, Ph.D., dated July 29, 2004
10.20(3)	Exclusive License and Technical Support Agreement dated August 28, 1998 by and between the Registrant and Affymax
10.21(3)*	Employee Offer Letter for Timothy A. Harkness
10.24(17)*	1995 Non-Employee Director's Stock Option Plan, as amended
10.25(17)*	1995 Stock Option Plan, as amended
10.26(6)*	Employee Offer Letter for Patricia Sharp
10.27(7)*	LJL BioSystems 1994 Equity Incentive Plan and Forms of Agreements
10.28(7)*	LJL BioSystems 1997 Stock Plan and Forms of Agreements
10.29(7)*	LJL BioSystems 1998 Directors' Stock Option Plan and Forms of Agreements
10.33(9)	Lease Agreement dated May 26, 2000 by and between Aetna Life Insurance Company and the Registrant
10.34(10)*	Change in Control Severance Benefit Plan
10.35(12)	Rights Agreement, dated October 25, 2001, among the Registrant and EquiServe Trust Company, N.A
10.37(8)*	Key Employee Agreement for Tom O'Lenic
10.38(17)*	2001 Stock Option Plan, as amended

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
10.39(14)	Lease dated May 28, 2002 by and between The Irvine Company and the Registrant
10.40(14)*	Letter Agreement dated April 11, 2002 by and between the Registrant and Joseph D. Keegan, Ph.D.
10.41(14)*	Letter Agreement dated April 11, 2002 by and between the Registrant and Timothy A. Harkness
10.43*	Amended Key Employment Agreement for Timothy A. Harkness
10.44*	Employee Offer Letter for Alan Finkel
10.45*	Employee Offer Letter for Steven Davenport
10.46*	Employee Offer Letter for Jan Hughes
10.47*	Amended Employee Offer Letter for Jan Hughes
10.48(18)*	Non-Employee Director Compensation Arrangements
10.49(19)*	Executive Officer Compensation Arrangements
21.1	Subsidiaries of the Registrant
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Certification required by Rule 13a-14(a) or Rule 15d-14(a)
31.2	Certification required by Rule 13a-14(a) or Rule 15d-14(a)
32.1**	Certifications required by Rule 13a-14(b) or Rule 15d-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C 1350)

(1) Incorporated by reference to the similarly described exhibit in our Registration Statement on Form S-1 (File No. 33-98926), as amended.

(2) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated June 30, 1998, and filed August 13, 1998.

(3) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated September 30, 1998, and filed November 13, 1998.

(5) Incorporated by reference to the similarly described exhibit in our Current Report on Form 8-K filed June 12, 2000.

(6) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated September 30, 2000 and filed on November 13, 2000.

(7) Incorporated by reference to the similarly described exhibit filed with LJL BioSystems' Registration Statement on Form S-1 (File No. 333-43529) declared effective on March 12, 1998.

(8) Incorporated by reference to the similarly described exhibit in our Form 10-K Annual Report dated December 31, 2001 and filed on April 1, 2002.

(9) Incorporated by reference to the similarly described exhibit in our Form 10-K Annual Report dated December 31, 2000 and filed on March 30, 2001.

(10) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated March 31, 2001 and filed on May 11, 2001.

(11) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated June 30, 2001 and filed on August 14, 2001.

(12) Incorporated by reference to the similarly described exhibit in our Current Report on Form 8-K filed October 30, 2001.

(13) Incorporated by reference to the similarly described exhibit in our Current Report on Form 8-K filed on June 12, 2002.

(14) Incorporated by reference to the similarly described exhibit in our Form 10-K Annual Report dated December 31, 2003 and filed on March 27, 2003.

(15) Incorporated by reference to the similarly described exhibit in our Current Report on Form 8-K filed on March 22, 2004.

(16) Incorporated by reference to the similarly described exhibit in our Registration Statement on Form S-4 (File No. 333-114934), as amended.

(17) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated September 30, 2004, and filed on November 9, 2004.

(18) Incorporated by reference to the information in our Registration Statement on form S-4 (File No. 333-114934), as amended, under the heading "Molecular Devices Executive Compensation — Compensation of Directors."

(19) Incorporated by reference to the information in our Current Report on Form 8-K filed February 23, 2005 under the heading "Item 1.01. Entry Into a Material Definitive Agreement."

* Management contract or compensatory plan or arrangement.

** The certification attached as Exhibit 32.1 accompanies the Annual Report on Form 10-K pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized on March 16, 2005.

MOLECULAR DEVICES CORPORATION

BY: /s/ JOSEPH D. KEEGAN, PH.D.

JOSEPH D. KEEGAN, PH.D.
PRESIDENT AND CHIEF EXECUTIVE OFFICER

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Joseph D. Keegan, Ph.D. and Timothy A. Harkness, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution for him, and in his name in any and all capacities, to sign any and all 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, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and any of them or his or her substitute or substitutes, may lawfully 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 and in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ JOSEPH D. KEEGAN, PH.D. Joseph D. Keegan, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	March 16, 2005
/s/ TIMOTHY A. HARKNESS Timothy A. Harkness	Senior Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	March 16, 2005
/s/ MOSHE H. ALAFI Moshe H. Alafi	Director	March 16, 2005
/s/ DAVID L. ANDERSON David L. Anderson	Director	March 16, 2005
/s/ A. BLAINE BOWMAN A. Blaine Bowman	Director	March 16, 2005
/s/ PAUL GODDARD, PH.D. Paul Goddard, Ph.D.	Director	March 16, 2005
/s/ ANDRE F. MARION Andre F. Marion	Director	March 16, 2005

SIGNATURE	TITLE	DATE
/s/ HARDEN M. MCCONNELL, PH.D. Harden M. McConnell, Ph.D.	Director	March 16, 2005
/s/ J. ALLAN WAITZ, PH.D. J. Allan Waitz, Ph.D.	Director	March 16, 2005

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Molecular Devices Corporation

We have audited the accompanying consolidated balance sheets of Molecular Devices Corporation and its subsidiaries as of December 31, 2004 and 2003, and the related consolidated statements of income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2004. Our audits also included the financial statement schedule listed in the Index at Part IV, Item 15. These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Molecular Devices Corporation and its subsidiaries as of December 31, 2004 and 2003, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2004, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

As discussed in Note 1 to the consolidated financial statements, in 2002 the Company changed its method of accounting for goodwill and other intangible assets.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Molecular Devices Corporation's internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 11, 2005 expressed an unqualified opinion thereon.

/s/ Ernst & Young, LLP

Palo Alto, California
March 11, 2005

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Molecular Devices Corporation

We have audited management's assessment, included in the accompanying Management Report on Internal Control Over Financial Reporting, that Molecular Devices Corporation maintained effective internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Molecular Devices Corporation's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management's assessment and an opinion on the effectiveness of the company's internal control over financial reporting based on our audit.

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

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

In our opinion, management's assessment that Molecular Devices Corporation maintained effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on the COSO criteria. Also, in our opinion, Molecular Devices Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Molecular Devices Corporation as of December 31, 2004 and 2003, and the related consolidated statements of income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2004 of Molecular Devices Corporation and our report dated March 11, 2005 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Palo Alto, California
March 11, 2005

MOLECULAR DEVICES CORPORATION AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(IN THOUSANDS, EXCEPT SHARE AND PER SHARE AMOUNTS)

	DECEMBER 31,	
	2004	2003
ASSETS		
Current assets:		
Cash and cash equivalents	$ 30,175	$ 50,260
Short-term investments	—	8,114
Accounts receivable, net of allowance for doubtful accounts of $339 and $408	36,995	26,209
Inventories, net	25,785	17,025
Deferred tax assets	9,654	5,223
Prepaids and other current assets	2,780	1,849
Total current assets	105,389	108,680
Long-term investments	—	1,736
Equipment and leasehold improvements, net	11,762	9,706
Goodwill	104,228	26,017
Developed technology	16,339	1,248
Intangible and other assets	17,511	19,526
	$255,229	$166,913
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 7,085	$ 4,019
Accrued compensation	8,447	6,295
Other accrued liabilities	14,995	5,942
Deferred revenue	7,306	5,119
Total current liabilities	37,833	21,375
Other long-term liabilities	1,452	—
Deferred tax liabilities	5,324	—
Total liabilities	44,609	21,375
Commitments and contingencies (Note 3)		
Stockholders' equity:		
Preferred stock, $.001 par value; 3,000,000 shares authorized	—	—
Common stock, $.001 par value; 60,000,000 shares authorized; 19,363,579 and 15,653,283 shares issued and 17,152,610 and 14,778,837 outstanding at December 31, 2004 and 2003, respectively	19	16
Additional paid-in capital	262,676	184,956
Accumulated deficit	(8,873)	(26,106)
Treasury stock, at cost; 2,429,446 and 874,446 shares at December 31, 2004 and 2003, respectively	(46,595)	(14,968)
Deferred stock compensation	(113)	—
Accumulated other comprehensive income	3,506	1,640
Total stockholders' equity	210,620	145,538
	$255,229	$166,913

See accompanying notes.

MOLECULAR DEVICES CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME
(IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)

	YEARS ENDED DECEMBER 31,		
	2004	2003	2002
Revenues	$148,529	$115,581	$102,157
Cost of revenues	56,274	43,256	40,561
Gross profit	92,255	72,325	61,596
Operating expenses:			
Research and development	22,038	18,679	18,002
Selling, general and administrative	52,469	43,457	35,435
Acquired in-process research and development	5,000	—	—
Restructuring charge	1,157	—	—
Total operating expenses	80,664	62,136	53,437
Income from operations	11,591	10,189	8,159
Gain on sale of equity securities	18,288	—	—
Interest expense	(187)	—	—
Interest and other income, net	319	872	1,562
Income before income taxes	30,011	11,061	9,721
Income tax provision	12,778	3,319	2,916
Net income	$ 17,233	$ 7,742	$ 6,805
Basic net income per share	$ 1.08	$ 0.51	$ 0.44
Diluted net income per share	$ 1.04	$ 0.51	$ 0.44

See accompanying notes.

MOLECULAR DEVICES CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(IN THOUSANDS, EXCEPT SHARE AMOUNTS)

	Common Stock		Additional Paid-In	Accumulated	Treasury Stock	Deferred Stock	Accumulated Other Comprehensive	Total Stockholders'
	Shares	Amount	Capital	Deficit	(at cost)	Compensation	Income (Loss)	Equity
Balance at December 31, 2001	15,481,844	$15	$181,233	$(40,653)	$ (160)	$(332)	$(2,618)	$137,485
Comprehensive income								
Net income	—	—	—	6,805	—	—	—	6,805
Currency translation, net of tax	—	—	—	—	—	—	2,114	2,114
Total comprehensive income								8,919
Issuance of shares of common stock for options exercised and restricted stock granted	25,107	—	371	—	—	74	—	445
Issuance of shares of common stock under Employee Stock Purchase Plan	28,194	—	427	—	—	—	—	427
Repurchase of shares of common stock	(222,253)	—	—	—	(4,472)	—	—	(4,472)
Reversal of deferred compensation for terminated employees	—	—	(258)	—	—	258	—	—
Balance at December 31, 2002	15,312,892	15	181,773	(33,848)	(4,632)	—	(504)	142,804
Comprehensive income								
Net income	—	—	—	7,742	—	—	—	7,742
Currency translation, net of tax	—	—	—	—	—	—	2,144	2,144
Total comprehensive income								9,886
Issuance of shares of common stock for options exercised	28,792	—	305	—	—	—	—	305
Issuance of shares of common stock under Employee Stock Purchase Plan	69,301	1	992	—	—	—	—	993
Income tax benefit associated with the exercise of stock options	—	—	1,886	—	—	—	—	1,886
Repurchase of shares of common stock	(632,148)	—	—	—	(10,336)	—	—	(10,336)
Balance at December 31, 2003	14,778,837	16	184,956	(26,106)	(14,968)	—	1,640	145,538
Comprehensive income								
Net income	—	—	—	17,233	—	—	—	17,233
Currency translation, net of tax	—	—	—	—	—	—	1,866	1,866
Total comprehensive income								19,099
Issuance of shares of common stock to acquire Axon Instruments, Inc., net of issuance costs of $784	3,582,655	3	69,648	—	—	—	—	69,651
Issuance of shares of common stock for options exercised	290,619	—	3,266	—	—	—	—	3,266
Issuance of shares of common stock under Employee Stock Purchase Plan	55,499	—	872	—	—	—	—	872
Income tax benefit associated with the exercise of stock options	—	—	3,934	—	—	—	—	3,934
Repurchase of shares of common stock	(1,555,000)	—	—	—	(31,627)	—	—	(31,627)
Deferred stock compensation	—	—	—	—	—	(226)	—	(226)
Amortization of deferred stock compensation	—	—	—	—	—	113	—	113
Balance at December 31, 2004	17,152,610	$19	$262,676	$ (8,873)	$(46,595)	$(113)	$ 3,506	$210,620

See accompanying notes.

MOLECULAR DEVICES CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(IN THOUSANDS, EXCEPT SHARE AMOUNTS)

	YEARS ENDED DECEMBER 31,		
	2004	2003	2002
Cash flows from operating activities:			
Net income	$ 17,233	$ 7,742	$ 6,805
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	5,818	5,304	3,847
Amortization of intangible assets	1,247	425	280
Amortization of deferred stock compensation	113	—	74
Charge for acquired in-process research and development	5,000	—	—
Gain on sale of equity securities	(18,288)	—	—
Decrease in deferred tax assets	4,297	1,140	827
Loss on disposal of fixed assets	23	—	—
Equity investment exchanged for services	653	—	—
Income tax benefit realized as a result of employee exercises of stock options	3,934	1,886	—
(Increase) decrease in assets:			
Accounts receivable	(2,715)	1,740	(345)
Inventories	1,188	(412)	10
Other current assets	(233)	(41)	594
Increase (decrease) in liabilities:			
Accounts payable	(576)	1,147	(145)
Accrued compensation	3,454	1,662	1,030
Other accrued liabilities	1,614	(2,560)	1,690
Deferred revenue	377	714	595
Net cash provided by operating activities	23,139	18,747	15,262
Cash flows from investing activities:			
Purchases of investments	—	(15,275)	(17,680)
Proceeds from sales and maturities of available-for-sale investments	9,850	15,475	18,515
Proceeds from sale of equity securities	28,288	—	—
Capital expenditures	(4,773)	(2,399)	(2,295)
Acquisitions, net of cash on hand	(48,533)	—	(22,927)
Increase in other assets	(1,600)	(1,294)	(372)
Net cash used in investing activities	(16,768)	(3,493)	(24,759)
Cash flows from financing activities:			
Proceeds from borrowings on credit facility	15,000	—	—
Repayment of borrowings	(15,000)	—	—
Issuance of common stock	4,138	1,299	798
Purchase of treasury stock	(31,627)	(10,336)	(4,472)
Net cash used in financing activities	(27,489)	(9,037)	(3,674)
Effect of exchange rate changes on cash	1,033	310	532
Net (decrease) increase in cash and cash equivalents	(20,085)	6,527	(12,639)
Cash and cash equivalents at beginning of year	50,260	43,733	56,372
Cash and cash equivalents at end of year	$ 30,175	$ 50,260	$ 43,733
Supplemental cash flow information:			
Cash paid during the year for:			
Interest	$ 186	$ —	$ —
Income taxes	$ 2,972	$ 2,143	$ 496
Issuance of 3,582,655 shares of common stock in conjunction with the acquisition of Axon Instruments, Inc. in July 2004	$ 69,648	$ —	$ —

See accompanying notes.

MOLECULAR DEVICES CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Summary of Significant Accounting Policies

BASIS OF PRESENTATION

Molecular Devices Corporation ("Molecular Devices," "the Company," "our," "us" or "we"), a Delaware corporation, is principally involved in the design, development, manufacture, sale and service of bioanalytical measurement systems that accelerate and improve drug discovery and other life sciences research. The customers for our products include leading pharmaceutical and biotechnology companies as well as medical centers, universities, government research laboratories and other institutions throughout the world.

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of Molecular Devices and its wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated.

USE OF ESTIMATES

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

CASH EQUIVALENTS

Cash equivalents consist of highly liquid investments, principally money market accounts and marketable debt securities, with maturities of three months or less at the time of purchase.

INVESTMENTS

Our short-term and long-term investments consist of marketable securities classified as "available-for-sale." Investments with maturities within twelve months of the balance sheet date are considered short-term. Those investments maturing beyond twelve months from the balance sheet date are considered long-term. Available-for-sale securities are carried at fair market value, with unrealized gains and losses, net of tax, included in accumulated other comprehensive income (loss) in stockholders' equity. Gains and losses on securities sold are based on the specific identification method and are included in the results of operations. Realized gains and losses have been historically immaterial and combined with interest income in the Consolidated Statements of Income as interest and other income, net.

Fair values of marketable securities are based on quoted market values and consisted of the following:

	DECEMBER 31,	
	2004	2003
	(In thousands)	
Short-term investments:		
Federal government securities	$—	$5,960
Corporate securities	—	2,154
	$—	$8,114
Long-term investments:		
Federal government securities	$—	$1,736

CONCENTRATION OF CREDIT RISK

Financial instruments that potentially subject us to concentrations of credit risk are primarily cash, cash equivalents, short-term investments and accounts receivable. We deposit cash with high credit quality financial institutions.

ACCOUNTS RECEIVABLE

We sell our products primarily to corporations, academic institutions, government entities and distributors within the drug discovery and life sciences research markets. We perform ongoing credit evaluations of our customers and generally do not require collateral. We provide reserves against trade receivables for estimated losses that may result from customers'

inability to pay. The amount of the reserve is determined by analyzing known uncollectible accounts, aged receivables, economic conditions in the customers' country or industry, historical losses and customer credit-worthiness. Amounts later determined and specifically identified to be uncollectible are charged or written off against the reserve. Estimated losses have historically been within our expectations. In 2003, one customer accounted for approximately 5% of sales and no single customer accounted for more than 5% of sales in 2004.

INVENTORIES

Inventories are stated on a first-in, first-out basis at the lower of cost or market. We write down our inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by management, additional inventory write-downs may be required. Such write-downs have historically been within our expectations.

CAPITALIZED SOFTWARE COSTS

Software development costs incurred subsequent to the establishment of technological feasibility are capitalized in accordance with the Financial Accounting Standards Board ("FASB") Statement No. 86, *"Accounting for the Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed."* No amounts have been capitalized to date, as costs incurred after the establishment of technological feasibility have not been material.

EQUIPMENT AND LEASEHOLD IMPROVEMENTS

Equipment is recorded at cost and depreciated using the straight-line method over the estimated useful lives of the assets (ranging from three to five years). Leasehold improvements are amortized over the remaining term of the lease, or the life of the asset, whichever is shorter. Maintenance and repairs are expensed as incurred. Depreciation expense for 2004, 2003 and 2002 was $4.3 million, $3.7 million and $3.2 million, respectively.

GOODWILL

Goodwill represents the difference between the purchase price and the fair value of net assets when accounted for by the purchase method of accounting. Prior to 2002, goodwill was amortized using the straight-line method over 10 to 15 years. In January 2002, we adopted FASB Statement No. 142, *"Goodwill and Other Intangible Assets"* ("FAS 142") and, accordingly, ceased amortizing goodwill. In conjunction with the adoption of FAS 142, we performed an initial impairment test of goodwill and found no impairment.

FAS No. 142 requires periodic evaluations for impairment of goodwill balances. We perform our goodwill impairment tests annually based on the market capitalization approach during the third quarter of our fiscal year, and more frequently if an event or circumstance indicates that impairment has occurred. Based on our annual evaluations for impairment of goodwill, we determined that no impairment of goodwill existed at any period presented.

INTANGIBLE AND OTHER ASSETS

Intangible and other assets include patents, developed technology, license fees, backlog, distribution rights, tradename and strategic investments in privately held companies that have been accounted for under the cost method. Patents, developed technology and license fees are amortized over their expected useful life of ten years. Order backlog is amortized over a life of one year. Tradename and distribution rights are assessed to have an indefinite life and therefore are not subject to amortization.

IMPAIRMENT OF LONG-LIVED ASSETS

We evaluate long-lived assets, including investments accounted for under the cost method, for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable based on expected undiscounted cash flows attributable to that asset. The amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired asset. For long-lived assets, fair value would be measured based on discounted expected cash flows. There were no long-lived assets that were considered to be impaired during any period presented.

EQUITY INVESTMENTS

We invest in equity instruments of privately held companies for business and strategic purposes. These investments are included in intangible and other assets and are accounted for under the cost method when ownership is less than

20 percent of voting securities and we do not have the ability to exercise significant influence over operations. When our ownership exceeds 20 percent of voting securities but is less than 50 percent, or we have the ability to exercise significant influence, the investment is accounted for under the equity method. Under the equity method, the investee's proportionate share of net income or loss and amortization of the investee's net excess investment over its equity in net assets is included in net income or loss. As of December 31, 2004, we did not hold any investments accounted for under the equity method. We regularly review the assumptions underlying the operating performance and cash flow forecasts in assessing the fair values. We monitor the preceding factors to identify events or circumstances which would cause us to test for other than temporary impairment and revise our assumptions for the estimated recovery of equity investments. There were no investments considered impaired during any of the periods presented.

In October 2004, Serologicals Corporation ("Serologicals") purchased Upstate Group, Inc. ("Upstate"), a privately held company in which we held an equity interest. As a result of the acquisition, we received cash of $9.6 million and common stock in Serologicals. Subsequently, we disposed of our entire equity investment in Serologicals. The net gain as a result of these transactions was $18.3 million, which is reported as gain on sale of equity securities in the Consolidated Statements of Income.

INCOME TAXES

Income taxes are accounted for under the liability method whereby deferred tax asset or liability account balances are calculated at the balance sheet date using current tax laws and rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized in the future.

FOREIGN CURRENCY TRANSLATION

We translate the assets and liabilities of our foreign subsidiaries into dollars at the rates of exchange in effect at the end of the period and translate revenues and expenses using rates in effect during the period. Gains and losses from these translations are accumulated as a separate component of stockholders' equity. Gains and losses resulting from foreign currency transactions are immaterial and are included in the Consolidated Statements of Income within interest and other income, net.

REVENUE RECOGNITION AND WARRANTY

We apply the provisions of the following authoritative literature in the development of our revenue recognition policies:

- Emerging Issues Task Force ("EITF"), Issue No. 00-21, *"Revenue Arrangements with Multiple Deliverables."* Revenue arrangements with multiple elements are divided into separate units of accounting if the deliverables in the arrangement have value to the customer on a stand alone basis, there is objective and reliable evidence of the fair value of the undelivered elements and there are no rights of return or additional performance guarantees by the Company.

- Statement of Position 97-2, *"Software Revenue Recognition."* Revenue earned on software arrangements involving multiple elements is allocated to each element based on the relative fair values of the elements as determined by means of our quoting process and published price lists.

- Staff Accounting Bulletin ("SAB") No. 101, *"Revenue Recognition in Financial Statements"* (as amended by SAB 104). Revenue is recognized when the following four criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price is fixed or determinable; and (4) collectibility is reasonably assured.

A majority of our revenue is derived from the sale of instruments to end-users with a one-year warranty. These arrangements include a single element (the instrument). Other single-element arrangements include the sale of consumables, software, service, installation or training. Arrangements incorporating multiple elements may exist, either through one invoice or through separate invoices entered into with a single customer at or near the same time. These multiple-element arrangements can include any combination of the previously described products or services.

All single-element and multiple-element arrangements are evidenced by an invoice in response to a written purchase order. Each element of an arrangement is invoiced at fair value as determined by means of our quoting process and

published price lists. Standard end-user terms include: risk of loss transferring to the purchaser at the time of shipment, net 30 day payment terms, no right of return or exchange, no right to upgrades and no acceptance provisions.

We do not enter into arrangements that require performance in excess of our published specifications.

Our revenue recognition criteria are as follows. In multiple element arrangements, each element is invoiced at fair value, and our revenue recognition criteria are applied to each element of the arrangement.

- Instruments, software and consumables — We recognize revenue with respect to sales of instruments, software and consumables at the time that an instrument, software or consumable is shipped, in accordance with the shipping terms of the invoice. Under FOB Destination terms, we do not recognize revenue until the product arrives at the customer site. We determine that the SAB No. 104 criteria have been met through receipt of a valid purchase order and issuance by us of either a sales order confirmation or an invoice, confirmation of product shipment (or receipt, when FOB Destination terms apply), issuance of an invoice indicating the price and conduct of a credit check or, in certain circumstances, receipt of prior payment.

- Service, installation and training — Revenue from service events not covered by warranty or a service contract is recognized upon completion of the service. Service can be provided in the field or at our service depot. For a small number of products, we offer the option to purchase installation services. Installation is billed separately at the time of performance and is not part of a package price for instruments. We have established a fair value for installation services, as installation can be purchased with or without an instrument. Further, a third party or the customer can perform the installation. Training is billed separately at the time of performance and is not part of a package price for instruments. Training revenue is recognized upon completion of the training. We determine that the SAB No. 104 criteria have been met through receipt of a valid purchase order and issuance by us of either a sales order confirmation or an invoice, receipt of a customer acknowledgment that the service, installation or training has been completed, issuance of an invoice indicating the price and conduct of a credit check or, in certain circumstances, receipt of prior payment.

- Service Contracts — Revenue from service contracts for our instruments, generally with a one-year term, is recognized ratably over the period of coverage. We determine that the SAB No. 104 criteria have been met through receipt of a valid purchase order and issuance by us of either a sales order confirmation or an invoice, issuance of an invoice indicating the price and conduct of a credit check or, in certain circumstances, receipt of prior payment.

Future warranty costs are estimated based on historical experience and provided for at the time of sale. Freight costs for revenue-generating shipments are charged to costs of goods sold.

ADVERTISING COSTS

We expense the cost of advertising as incurred. Such costs approximated $1.1 million, $782,000 and $1.1 million for 2004, 2003 and 2002, respectively.

RECENT ACCOUNTING PRONOUNCEMENT

In December 2004, the FASB issued Statement No. 123 (revised 2004), *"Share-Based Payment"* ("FAS 123R") which is a revision of FASB Statement No. 123, *"Accounting for Stock-Based Compensation"* ("FAS 123"), and supercedes APB Opinion No. 25, *"Accounting for Stock Issued to Employees"* ("APB Opinion 25"). FAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the financial statements based on their fair values, beginning with the first interim or annual period after June 15, 2005, with early adoption encouraged. The pro forma disclosures previously permitted under FAS 123 will no longer be an alternative to financial statement recognition. We are required to adopt FAS 123R in our third quarter of fiscal 2005, beginning July 1, 2005. Under FAS 123R, we must determine the appropriate fair value model to be used for valuing share-based payments, the amortization method for compensation cost and the transition method to be used upon adoption. The transition methods include modified prospective and modified retrospective adoption options. Under the modified prospective method, compensation cost is recognized beginning with the effective date (a) based on the requirements of FAS 123R for all share-based payments granted after the effective date and (b) based on the requirements of FAS 123 for all awards granted to employees prior to the effective date of FAS 123R that remain unvested on the effective date. The modified retrospective method includes the requirements of the modified prospective method described above, but also permits

entities to restate, based on the amounts previously recognized under Statement 123 for purposes of pro forma disclosures, either (a) all prior periods presented or (b) prior interim periods of the year of adoption. As permitted by FAS 123, we currently account for share-based payments to employees using APB Opinion 25's intrinsic value method and, as such, recognize no compensation cost for employee stock options. Although expected to be material, we cannot predict the impact of adoption of FAS 123R at this time because it will depend on levels of share-based payments granted in the future. However, had we adopted FAS 123R in prior periods, the impact of that standard would have approximated the impact of FAS 123 as described in the disclosure of pro forma net income and earnings per share in Note 1 to our consolidated financial statements. FAS 123R also requires the benefits of tax deductions in excess of recognized compensation cost to be reported as a financing cash flow, rather than as an operating cash flow as required under current literature. This requirement will reduce net operating cash flows and increase net financing cash flows in periods after adoption. While we cannot estimate what those amounts will be in the future (because they depend on, among other things, when employees exercise stock options), the amount of operating cash flows recognized in prior periods for such excess tax deductions were $3.9 million, $1.9 million and $0 in 2004, 2003 and 2002, respectively.

PER SHARE DATA

Basic net income per share is computed based on the weighted average number of shares of our common stock outstanding. Diluted net income per share is computed based on the weighted average number of shares of our common stock outstanding and other dilutive securities. Dilutive securities consist of the incremental common shares issuable upon the exercise of stock options and warrants (using the treasury stock method).

Computation of diluted earnings per share is as follows (in thousands, except per share amounts):

	YEARS ENDED DECEMBER 31,		
	2004	2003	2002
Weighted average common shares outstanding for the period	16,028	15,067	15,348
Common equivalent shares assuming exercise of stock options under the treasury stock method	504	112	109
Shares used in computing diluted net income per share	16,532	15,179	15,457
Net income	$17,233	$ 7,742	$ 6,805
Basic net income per share	$ 1.08	$ 0.51	$ 0.44
Diluted net income per share	$ 1.04	$ 0.51	$ 0.44

Options to purchase 1,428,219 shares of common stock at a weighted average per share exercise price of $37.63 were outstanding during 2004, but were not included in the computation of diluted earnings per share for that year as the options' weighted-average exercise price was greater than the average market price of the common shares and, therefore, the effect would have been anti-dilutive. In 2003 and 2002, the total number of shares excluded from the calculations of diluted net income per share were 2,085,413 and 2,115,476, respectively. Such securities, had they been dilutive, would have been included in the computations of diluted net income per share using the treasury stock method.

STOCK BASED COMPENSATION

As permitted by FAS 123, we apply the intrinsic value method of accounting as described in APB Opinion 25 and related interpretations in accounting for our stock option plans and, accordingly, recognize no compensation expense for stock option grants with an exercise price equal to the fair market value of the shares at the date of grant. If we had elected to recognize compensation cost based on the fair value of the options granted at grant date and shares issued under stock

purchase plans as prescribed by FAS 123, net income (loss) and net income (loss) per share would have been changed to the pro forma amounts indicated in the table below (in thousands, except per share amounts):

	YEARS ENDED DECEMBER 31,		
	2004	2003	2002
Net income — as reported	$17,233	$ 7,742	$ 6,805
Plus: Stock based employee compensation expense included in reported net income, net of tax	65	—	—
Less: Stock based compensation expense determined using the fair value method, net of tax	(6,301)	(7,520)	(7,886)
Net income (loss) — pro forma	$10,997	$ 222	$(1,081)
Net income (loss) per share:			
Basic — as reported	$ 1.08	$ 0.51	$ 0.44
Basic — pro forma	0.69	0.01	(0.07)
Diluted — as reported	1.04	0.51	0.44
Diluted — pro forma	0.67	0.01	(0.07)

The pro forma net income (loss) and net income (loss) per share disclosed above are not likely to be representative of the effects on net income (loss) and net income (loss) per share on a pro forma basis in future years, as subsequent years may include additional grants and years of vesting.

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model with the following assumptions:

	2004	2003	2002
Expected dividend yield	0%	0%	0%
Expected stock price volatility	86%	81%	85%
Risk-free interest rate	4.1%	2.9%	4.4%
Expected life of options	5.2 years	6.2 years	5.6 years

The weighted average grant date fair value of options granted during the years ended December 31, 2004, 2003 and 2002 was $9.89, $11.50 and $14.06 per share, respectively.

COMPREHENSIVE INCOME (LOSS)

Comprehensive income (loss) is comprised of net income and other items of comprehensive income. Other comprehensive income (loss) includes cumulative translation adjustments from the translation of foreign subsidiaries' financial statements, and unrealized gains and losses on available-for-sale securities, if material.

RECLASSIFICATIONS

Certain reclassifications have been made to conform prior period financial information to the current presentation. These reclassifications had no effect on reported income or losses. A reclassification of certain intangibles from intangible and other assets to developed technology has been made in the 2003 Consolidated Balance Sheet to conform to the December 31, 2004 presentation.

Note 2. Balance Sheet Amounts

	DECEMBER 31,	
	2004	2003
	(In thousands)	
Inventories, net:		
Raw materials	$ 12,521	$ 6,213
Work-in-process	2,202	600
Finished goods and demonstration equipment	11,062	10,212
	$ 25,785	$ 17,025
Equipment and leasehold improvements:		
Machinery and equipment	$ 21,474	$ 15,170
Software	4,299	3,727
Furniture and fixtures	4,331	3,028
Leasehold improvements	8,206	6,225
	38,310	28,150
Less accumulated depreciation and amortization	(26,548)	(18,444)
	$ 11,762	$ 9,706
Intangible and other assets:		
Equity investments	$ 2,200	$ 12,353
Intangible assets	13,904	4,079
Other assets	1,407	3,094
	$ 17,511	$ 19,526
Other accrued liabilities:		
Accrued income tax	$ 3,128	$ 939
Warranty accrual	2,276	1,502
Other	9,591	3,501
	$ 14,995	$ 5,942

Note 3. Commitments and Contingencies

OPERATING LEASES

Our facilities are leased under noncancelable operating leases. The leases generally require payment of taxes, insurance and maintenance costs on leased facilities. Minimum annual rental commitments under these noncancelable operating leases for the years ending 2005, 2006, 2007, 2008, 2009 and thereafter, are approximately $7.1 million, $7.1 million, $6.2 million, $2.4 million, $2.4 million and $2.4 million, respectively.

Net rental expense under operating leases related to our facilities was approximately $6.7 million, $5.3 million and $5.0 million, respectively, for each of the three years ended December 31, 2004, 2003 and 2002.

PURCHASE OBLIGATIONS

We have contractual commitments for the purchase of products, components and services, ending in 2005. The minimum purchase commitments are based on a set percentage of our forecasted production, and for 2005, at current prices, is approximately $12.7 million. These purchase commitments are not expected to result in a material loss.

WARRANTY

At the time of sale, we record an estimate for warranty costs that may be incurred under product warranties. Warranty expense and activity are estimated based on historical experience. The warranty accrual is evaluated periodically and adjusted for changes in experience. Changes in the warranty liability during the years ended December 31, 2004 and 2003 were as follows (in thousands):

Balance December 31, 2002	$ 1,295
New warranties issued during the period	1,472
Cost of warranties incurred during the period	(1,265)
Balance December 31, 2003	1,502
New warranties issued during the period	1,976
Cost of warranties incurred during the period	(1,721)
Warranties assumed from Axon	519
Balance December 31, 2004	$ 2,276

GUARANTEES

Under our charter, we have agreed to indemnify any person who is made a party to any action or threatened with any action as a result of such person's service or having served as an officer or director of Molecular Devices or having served, at our request, as an officer or director of another company. The indemnification does not apply if the person is determined not to have acted in good faith in the reasonable belief that his or her actions were in the best interest of Molecular Devices. The maximum potential amount of future payments that we could be required to make under the charter provision and the corresponding indemnification agreements is unlimited; however, we have director's and officer's liability insurance policies that, in most cases, would limit our exposure and enable us to recover a portion of any future amounts paid. The estimated fair value of these indemnification provisions is minimal. Most of these indemnification provisions were grandfathered under the provisions of FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others," as they were in effect prior to December 31, 2003. Accordingly, we have no liabilities recorded for these provisions as of December 31, 2004.

We enter into indemnification provisions under our agreements with other companies in the ordinary course of business, typically with business partners, contractors, clinical sites and customers. Under these provisions we generally indemnify and hold harmless the indemnified party for losses suffered or incurred by the indemnified party as a result of our activities. These indemnification provisions generally survive termination of the underlying agreement. The maximum potential amount of future payments we could be required to make under these indemnification provisions is unlimited. We have not incurred material costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, the estimated fair value of these agreements is minimal. Accordingly, we have no liabilities recorded for these agreements as of December 31, 2004.

LITIGATION

On January 24, 2005, a former Axon distributor filed a claim against us. The claim alleges that we breached two authorized agency contracts that were entered into by the distributor and Axon. As we believe it is probable that we will pay some amount to settle this matter, we have adjusted the net book value of assets acquired from Axon, and accrued a liability for an amount as determined using the criteria in FAS 5, *"Accounting for Contingencies."*

Note 4. Acquisitions and Restructuring

AXON INSTRUMENTS, INC.

On July 1, 2004, we acquired all of the outstanding capital stock of Axon Instruments, Inc. ("Axon") pursuant to an Agreement and Plan of Merger and Reorganization, dated as of March 20, 2004, as amended as of May 21, 2004, with Axon and two of our wholly owned subsidiaries, Astros Acquisition Sub I, Inc. and Astros Acquisition Sub II, LLC.

The acquisition was accounted for under the purchase method of accounting. The results of operations of Axon have been included in the accompanying consolidated financial statements from the date of acquisition. The total cost of the acquisition is as follows (in thousands):

Common stock issued	$ 67,207
Cash paid	67,153
Common stock options assumed	3,225
Direct transaction costs	2,337
Total purchase price	$139,922

We issued approximately 3.6 million shares of Molecular Devices common stock to holders of Axon common stock. The fair value of the Molecular Devices common stock issued was based on the average of the closing prices for a range of trading days around and including the announcement date of the acquisition. We granted approximately 535,000 options to purchase Molecular Devices common stock at an average exercise price of $18.52 to holders of Axon employee common stock options. In addition, we granted approximately 37,000 options to purchase shares of Molecular Devices common stock at an exercise price of $19.07 to holders of other Axon options. The value of the Molecular Devices common stock options issued to Axon common stock option holders was computed using the Black-Scholes option pricing model, using the following assumptions:

	2004
Expected dividend yield	0%
Expected stock price volatility	53%
Risk-free interest rate	1.5%
Expected life of options	0.57 — 2.0 years

We allocated the purchase price based on the estimated fair value of the assets acquired and liabilities assumed. A valuation of the purchased intangible assets was undertaken by a third party valuation specialist to assist us in determining the estimated fair value of each identifiable asset and in allocating the purchase price among acquired assets, including the portion of the purchase price attributed to acquired in-process research and development projects. Projects that qualify as in-process research and development represent those that have not yet reached technological feasibility and which have no alternative use. Standard valuation procedures and techniques were utilized in determining the estimated fair value of the acquired in-process research and development. To determine the estimated fair value of the acquired in-process research and development, we considered, among other factors, the stage of development of each project, the time and resources needed to complete each project, and expected income and associated risks. Associated risks included the inherent difficulties and uncertainties in completing the project and thereby achieving technological feasibility, and the risks related to the viability of and potential changes to future target markets. The analysis resulted in $5.0 million of the purchase price being allocated to acquired in-process research and development and charged to earnings, using discount rates ranging from 27% to 32%. The in-process research and development acquired from Axon consists of projects related to the PatchXpress and ImageXpress product development initiatives. We estimated that the in-process projects related to each of these products varied from 62% to 75% complete, based on research and development complexity, costs and time expended to date relative to the expected remaining costs and time to reach technological feasibility.

The value assigned to acquired in-process research and development was determined by considering the importance of each project to the overall development plan, estimating costs to develop the purchased in-process research and development into commercially viable products, estimating the resulting net cash flows from the projects when completed and discounting the net cash flows to their present value. The revenue estimates used to value the acquired in-process research and development were based on estimates of relevant market sizes and growth factors, expected trends in technology and the nature and expected timing of new product introductions by Axon and its competitors. The rates utilized to discount the net cash flows to their present value were based on Axon's weighted average cost of capital. The weighted average cost of capital was adjusted to reflect the difficulties and uncertainties in completing each

project and thereby achieving technological feasibility, the percentage of completion of each project, anticipated market acceptance and penetration, and market growth rates and risks related to the impact of potential changes in future target markets.

Goodwill, representing the excess of the purchase price over the fair value of the net assets acquired, will not be amortized, consistent with the guidance in FAS 142. The goodwill associated with the Axon acquisition is not deductible for tax purposes. The acquired goodwill value is primarily based on the complimentary technology that is expected to strengthen Molecular Devices' product portfolio with systems for cellular neurosciences and genomics, and that combines complimentary product lines in the areas of high-throughput imaging and electrophysiology.

The excess of the purchase price over the identified net assets of Axon has been allocated as follows (in thousands):

Acquired goodwill	$ 78,211
Net book value of acquired assets and liabilities which approximates fair value	32,111
Acquired developed technology (amortized over ten years)	15,900
Acquired tradename	8,600
Acquired in-process research and development	5,000
Acquired backlog (amortized over one year)	100
	$139,922

The net book value of acquired assets and liabilities, which approximates fair value, as of June 30, 2004 was as follows (in thousands):

	AS OF JUNE 30, 2004
Assets:	
Cash and cash equivalents	$22,064
Accounts receivable	7,286
Inventories, net	11,253
Other current assets	6,256
Fixed assets	1,577
Intangible and other assets	1,999
Total assets	$50,435
Liabilities:	
Accounts payable and other current liabilities	$11,824
Long-term liabilities	6,500
Total liabilities	$18,324
Net book value of acquired assets and liabilities	$32,111

PRO FORMA RESULTS

The unaudited pro forma results of operations for the years ended December 31, 2004 and 2003 for Molecular Devices are set forth below (in thousands, except per share amounts). This presentation assumes that the Axon acquisition had

been consummated as of the beginning of each period presented. The net income includes, on a pre-tax basis, $5.0 million for the write-off of acquired in-process research and development costs for each period presented.

	2004	2003
Revenue	$168,164	$149,060
Net income	$ 11,951	$ 2,789
Diluted net income per share	$ 0.72	$ 0.15

The unaudited pro forma information does not purport to be indicative of the results that actually would have occurred had the above-noted acquisition been consummated on January 1, 2003 or of results that may occur in the future.

RESTRUCTURING

Concurrent with the acquisition, we implemented an integration plan which included the termination of Axon employees, the relocation or transfer to other sites of employees and the closure of duplicate facilities. Costs for this plan associated with employee severance and relocation totaled $500,000 of which $135,000 remains accrued as other accrued liabilities in the Consolidated Balance Sheets. Costs for the closure of duplicate facilities, representing an unfavorable lease liability associated with one of Axon's remaining leases, totaled $2.2 million including $700,000 classified in other accrued liabilities and $1.5 million classified in long-term obligations, net of current portion on the Consolidated Balance Sheets.

In the fourth quarter of 2004, we implemented an integration plan which included the termination of additional employees. Costs necessary to integrate the businesses of Molecular Devices and Axon that are expected to benefit future operations were expensed as restructuring charge after management completed and approved the restructuring plans and associated costs. Termination costs related to Molecular Devices employees totaled $1.2 million for the year ended December 31, 2004 and have been recognized as expense in restructuring charge in the Consolidated Statements of Income.

Activity for restructuring charges for the year ended December 31, 2004, is as follows (in thousands):

	Initial Cost	Payments	Balance at December 31, 2004
Axon employee severance and relocation	$ 500	$365	$ 135
Closure of duplicate facilities	2,200	—	2,200
Molecular Devices employee severance	1,157	124	1,033
Total	$3,857	$489	$3,368

UNIVERSAL IMAGING CORPORATION

On June 1, 2002, we acquired Universal Imaging Corporation ("UIC") pursuant to a Stock Purchase Agreement, in exchange for $22 million in cash. In addition, we incurred $1.2 million of acquisition costs. As a result of the acquisition, UIC became a wholly owned subsidiary of Molecular Devices. The results of operations for UIC were included in our results of operations beginning June 1, 2002. Valuation experts performed the allocation of purchase price between the tangible and intangible assets, including goodwill. The resulting goodwill was consistent with the deal rationale as the primary purpose for undertaking the acquisition was to acquire certain complementary technologies, which were valued separately, allowing the Company to strengthen its position in both the life sciences and drug discovery markets. Furthermore, there were substantial synergies resulting from the Company's leading position as a supplier of cell-based solutions in the drug discovery industry, as well as the Company's existing worldwide sales force. The excess of the

purchase price over the identified net assets of UIC has been allocated to goodwill, tradename and developed technology as follows (in thousands):

Acquired goodwill	$18,846
Net book value of acquired assets and liabilities which approximate fair value	2,179
Acquired developed technology (amortized over ten years)	1,468
Acquired tradename	707
	$23,200

Note 5. Goodwill, Purchased Intangible Assets and License Fees

Goodwill was $104.2 million and $26.0 million at December 31, 2004 and 2003, respectively. At December 31, 2004, purchased intangible assets not subject to amortization totaled $10.8 million and consisted of tradenames valued at $9.3 million and distribution rights valued at $1.5 million. At December 31, 2003, purchased intangible assets not subject to amortization totaled $707,000 million and consisted of tradenames. The distribution rights were acquired in 2004 from a former distributor of our products.

Purchased intangible assets subject to amortization include patents, developed technology and order backlog acquired through our acquisitions. In 2003 and 2004, we entered into numerous licensing arrangements that required up front payments of license fees. These purchased intangible assets and license fees, which are being amortized over their useful lives of ten years, except backlog which is amortized over a life of one year, consisted of the following (in thousands):

	DECEMBER 31, 2004			DECEMBER 31, 2003		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Patents	$ 1,372	$ 472	$ 900	$1,372	$335	$1,037
Developed Technology	17,368	1,029	16,339	1,468	220	1,248
License Fees	2,688	513	2,175	2,588	253	2,335
Backlog	100	42	58	—	—	—
Total	$21,528	$2,056	$19,472	$5,428	$808	$4,620

Amortization expense was $1.2 million, $425,000 and $280,000 for the years ended December 31, 2004, 2003 and 2002. The estimated future amortization expense of purchased intangible assets and license fees is as follows (in thousands):

For the year ending December 31,	Amortization Expense
2005	$ 2,191
2006	2,133
2007	2,133
2008	2,133
2009	2,133
Thereafter	8,749
	$19,472

Note 6. Stockholders' Equity

TREASURY STOCK

In 2004, we repurchased 1,555,000 shares of our common stock. These repurchases occurred at various times throughout the year. As of December 31, 2004, 2,429,446 repurchased shares remained on our balance sheet as treasury stock, at cost. As of December 31, 2004, approximately 575,000 shares remained available for repurchase under the stock repurchase program initially approved by the Board of Directors in August 2001.

Note 7. Stock Option and Equity Incentive Plans

Under our 1995 Stock Option Plan ("1995 Plan"), we are authorized to grant options to purchase common stock as either incentive or nonqualified stock options to officers, directors, employees and consultants. Shares authorized at December 31, 2004 equal 4,050,000 plus up to 1,000,000 shares previously reserved under our 1988 Stock Option Plan to the extent they were not previously issued or subject to outstanding options. Option grants expire in ten years and generally become exercisable in increments over a period of four to five years from the date of grant. Options may be granted with different vesting terms from time to time.

In September 1995, we established the 1995 Non-Employee Directors' Stock Option Plan (the "Directors' Plan"). Under the Directors' Plan, we are authorized to grant nonqualified stock options to purchase up to 347,500 shares of common stock at the fair market value of the common shares at the date of grant. Options granted under the Directors' Plan vest and become exercisable in four equal annual installments commencing one year from the date of the grant.

In July 2001, we established the 2001 Stock Option Plan (the "2001 Plan"). Under the 2001 Plan, we are authorized to grant options to purchase up to 100,000 shares of common stock to employees who are working or residing outside of the United States and are not officers or directors. Option grants expire in twelve years and generally become exercisable in increments over a period of four to five years from the date of grant. Options may be granted with different vesting terms from time to time.

As a result of our acquisition of Axon, we assumed options issued by Axon under multiple plans. At December 31, 2004, we have reserved approximately 433,000 shares of Molecular Devices common stock under Axon's 1993 Employee Stock Option Plan and its 2001 Equity Incentive Plan ("Axon employee stock options"), and approximately 23,000 shares under Entitlement Option plans ("Axon Entitlement options"). The Axon employee stock options vest over a maximum period of five years and expire ten years from the date of grant. The Axon Entitlement options, which are fully vested, expire in 2005.

The following table summarizes the activity under all of our plans, including the plans of companies that we acquired:

	Shares Available for Future Grant	Options Outstanding	Weighted Average Exercise Price
Balance December 31, 2001	854,571	2,225,357	30.32
Authorized	500,000	—	—
Granted	(591,813)	591,813	19.41
Exercised	—	(24,169)	14.28
Cancelled	227,669	(227,669)	33.76
Plan Expired	(24,130)	—	—
Balance December 31, 2002	966,297	2,565,332	27.87
Authorized	500,000	—	—
Granted	(562,855)	562,855	16.08
Exercised	—	(28,792)	10.62
Cancelled	139,054	(139,054)	32.93
Plan Expired	(7,770)	—	—
Balance December 31, 2003	1,034,726	2,960,341	25.55
Authorized	300,000	—	—
Granted	(522,500)	522,500	19.54
Assumed through acquisition of Axon	—	572,570	18.55
Exercised	—	(270,258)	12.18
Cancelled	271,501	(271,501)	24.74
Plan Expired	(18,267)	—	—
Balance December 31, 2004	1,065,460	3,513,652	24.59

The following table is a summary of our outstanding and exercisable options at December 31, 2004:

	Options Outstanding			Options Exercisable	
Range of exercise prices	Number outstanding	Weighted-average remaining contractual life (Yr.)	Weighted-average exercise price	Number exercisable	Weighted-average exercise price
$ 0.00 to $12.58	380,187	4.2	$ 6.69	343,303	$ 6.56
$12.59 to $25.16	2,258,017	6.6	19.21	1,288,860	19.65
$25.17 to $37.74	259,587	4.2	27.98	257,170	27.95
$37.75 to $50.33	386,273	4.5	45.90	383,026	45.91
$50.34 to $62.91	88,939	5.2	53.05	87,681	53.04
$62.92 to $75.49	56,500	5.7	75.28	54,421	75.28
$75.49 to $88.08	84,149	5.5	77.70	83,316	77.70
	3,513,652		$24.63	2,497,777	$27.12

There were 1,762,391 and 1,215,510 options exercisable under the various plans at December 31, 2003 and 2002, respectively.

DEFERRED COMPENSATION

In connection with the acquisition of Axon, we assumed unvested stock options held by Axon employees. We recorded deferred stock compensation totaling $226,000 based on the intrinsic value of these assumed unvested stock options. The deferred stock compensation is amortized over the options' remaining vesting period of one year.

EMPLOYEE STOCK PURCHASE PLANS

Under our Employee Stock Purchase Plan (the "ESPP"), 400,000 shares of common stock have been authorized for issuance. Shares may be purchased under the ESPP at 85% of the lesser of the fair market value of the common stock on the grant or the purchase date. As of December 31, 2004, 91,299 shares remained available for purchase under the ESPP.

401(k) PLAN

Our 401(k) Plan (the "Plan") covers substantially all of our U.S. based employees. Under the Plan, as amended in November 2004, eligible employees may make contributions subject to certain Internal Revenue Service restrictions. We began matching a portion of employee contributions in 1997, up to a maximum of 3% or $2,500, whichever is less, of each employee's eligible compensation. The match, which is subject to board approval based on a number of factors, is effective December 31 of each year and vests over a period of four years of service. For the years ended December 31, 2004, 2003 and 2002, we recognized as expense approximately $486,000, $492,000 and $388,000, respectively, under the Plan.

Axon maintained the Axon Instruments, Inc. 401(k) Savings and Retirement Plan (the "Axon Plan"), for its eligible employees. Effective December 31, 2004, the Axon Plan was discontinued and employee account balances were merged into the Plan.

STOCK RESERVED FOR ISSUANCE

As of December 31, 2004, we have 4,670,411 shares of common stock reserved for issuance under our stock option and employee stock purchase plans.

Note 8. Income Taxes

The components of the provision for income taxes are as follows (in thousands):

	YEARS ENDED DECEMBER 31,		
	2004	2003	2002
Current:			
Federal	$ 3,374	$ 150	$ 760
State	1,755	215	315
Foreign	650	1,815	1,025
	5,779	2,180	2,100
Deferred:			
Federal	6,089	1,938	1,209
State	730	437	(393)
Foreign	180	(1,236)	—
	6,999	1,139	816
	$12,778	$3,319	$2,916

The provision for income taxes differs from the amounts computed by applying the statutory federal income tax rate to income before income taxes. The source and tax effects of the differences are as follows (in thousands):

	YEARS ENDED DECEMBER 31,		
	2004	2003	2002
Income before provision for income taxes	$30,011	$11,061	$9,721
Income tax at statutory rate (35%)	10,504	3,871	3,402
Non-deductible acquired in-process research and development	1,750	—	—
State income tax, net of federal benefit	1,615	424	205
Extraterritorial income exclusion benefit	(410)	(147)	(109)
Research and development credits	(688)	(197)	(318)
Foreign losses currently not benefited	—	(708)	(419)
Other	7	76	155
	$12,778	$ 3,319	$2,916

Foreign pretax income was $1.4 million, $5.7 million and $3.9 million in 2004, 2003 and 2002, respectively.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting and the amount used for income tax purposes. The tax effects of temporary differences and carryforwards which give rise to significant portions of the deferred tax assets and liabilities are as follows (in thousands):

	DECEMBER 31,	
	2004	2003
Deferred tax assets:		
Deferred revenue and non-deductible reserves	$ 743	$ 449
Warranty and accrued expenses	4,185	2,395
Net operating losses carryforwards	3,007	4,150
Foreign loss carryforwards	447	314
Tax credit carryforwards	1,376	2,617
Intercompany transactions	512	394
Other	383	229
Valuation allowances	—	(2,906)
Total deferred tax assets	$10,653	$ 7,642
Deferred tax liabilities:		
Acquired intangible assets	(5,125)	—
Depreciation and amortization	(886)	(274)
Other	(198)	—
Total deferred tax liabilities	$(6,209)	$ (274)
Net deferred tax assets	$ 4,444	$ 7,368

The net valuation allowance decreased by $2.9 million and $736,000 in 2004 and 2003, respectively. The valuation allowance decrease relates to stock option deductions credited to equity that were realized through utilization of net operating loss carryforwards during 2004.

As of December 31, 2004, we had net operating loss carryforwards for federal income tax purposes of approximately $8.0 million, which expire in the years 2021 through 2024, and federal research and development credits of approximately $500,000 which expire in the years 2012 through 2024. We had net operating loss carryforwards for state income tax purposes of approximately $5.3 million which expire in the years 2006 through 2012 and research and development credits of approximately $700,000 for state income tax purposes which carryforward indefinitely. Utilization of the net operating loss carryforwards may be subject to substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. Such an annual limitation could result in the expiration of the net operating loss carryforwards before utilization.

The federal and state provisions do not reflect the tax savings resulting from deductions associated with our various stock option plans. These savings were $900,000, $100,000 and $1.9 million in 2004, 2003 and 2002, respectively.

As of December 31, 2004, we had unrecognized deferred tax liabilities of approximately $700,000 related to approximately $6.7 million of cumulative net undistributed earnings of foreign subsidiaries. These earnings are considered to be permanently reinvested in operations outside the United States.

On October 22, 2004, the President signed the American Jobs Creation Act of 2004 (the "Act"). The Act creates a temporary incentive for U.S. corporations to repatriate accumulated income earned abroad by providing an 85% dividends received deduction for certain dividends from controlled foreign corporations. The deduction is subject to a number of limitations and may result in the Act not being applicable to us. We are not yet in a position to decide on whether, and to what extent, we might repatriate foreign earnings that have not yet been remitted to the U.S. If we were to repatriate some amount up to the amount of accumulated earnings of $6.7 million, we would have a respective tax liability ranging from $300,000 to $700,000.

Note 9. Revolving Credit Facility

In connection with the acquisition of Axon as described in Note 4 above, we entered into a new senior unsecured credit facility with Union Bank of California, N.A., which provides us with a revolving credit facility in the amount of up to $30.0 million. The revolving credit facility is guaranteed by our domestic subsidiaries. All loans outstanding under the senior unsecured credit facility will bear interest at a rate per annum equal to, at our option, either the base rate plus 0.50% or the London InterBank Offered Rate (LIBOR) plus 1.25%. The revolving credit facility may be drawn, paid and reborrowed at our option, and matures on July 1, 2007. We initially used $15.0 million of this credit facility to partially finance the cash portion of the merger consideration paid to Axon shareholders and certain optionholders. The $15.0 million drawdown was repaid and the revolving credit facility had no outstanding balance as of December 31, 2004. At December 31, 2004, we were in compliance with all of the credit facility covenants.

Note 10. Industry Segment, Geographic and Customer Information

We operate in a single industry segment, and the chief operating decision maker views its operations as follows: the design, development, manufacture, sale and service of bioanalytical measurement systems for drug discovery and life sciences research applications.

Foreign subsidiaries' operations consist of research and development, sales, service, manufacturing and distribution. Summarized data for our domestic and international operations was as follows (in thousands):

	United States	International	Adjustments and Eliminations	Total
Year-Ended December 31, 2004				
Revenues	$133,662	$44,577	$(29,710)	$148,529
Income from operations	10,118	1,624	(151)	11,591
Identifiable assets	248,996	31,577	(25,344)	255,229
Year-Ended December 31, 2003				
Revenues	98,885	37,193	(20,497)	115,581
Income from operations	5,768	4,545	(124)	10,189
Identifiable assets	157,950	25,754	(16,791)	166,913
Year-Ended December 31, 2002				
Revenues	92,058	30,278	(20,179)	102,157
Income from operations	8,438	261	(540)	8,159
Identifiable assets	162,698	22,114	(21,911)	162,901

Our products are broken into two product families. The drug discovery family includes the FLIPR, Analyst, IonWorks, PatchXpress, ImageXpress and Discovery-1 systems, and related consumables. The life sciences research family includes the SpectraMax, MetaMorph, GenePix, Threshold, Skatron and Axopatch product lines. Consolidated revenue from our product families was as follows (in thousands):

	YEARS ENDED DECEMBER 31,		
	2004	2003	2002
Drug discovery	$ 61,457	$ 51,864	$ 45,826
Life sciences research	87,072	63,717	56,331
Total revenues	$148,529	$115,581	$102,157

Sources of consolidated revenue from significant geographic regions were as follows (in thousands):

	YEARS ENDED DECEMBER 31,		
	2004	2003	2002
North America	$ 90,454	$ 72,403	$ 64,819
Europe	38,515	28,090	25,331
Rest of World	19,560	15,088	12,007
Total revenues	$148,529	$115,581	$102,157

Note 11. Related Party Transactions

Our Chief Executive Officer is a member of the Board of Directors of Essen and Molecular Devices is also a minority investor in Essen Instruments ("Essen"). We paid Essen $290,000, $470,000 and $42,000 in royalties in the years ended December 31, 2004, 2003 and 2002, respectively. In 2003 and 2002, we paid Essen $1.7 million and $670,000, respectively, for inventory. At December 31, 2004, we owed Essen $79,000 for royalties payable.

In December 2003, Molecular Devices and Essen entered into a services agreement whereby Essen will provide certain services for two years in exchange for the return of a portion of the Essen shares owned by Molecular Devices. As of December 31, 2004, $654,000 in equity has been returned to Essen in exchange for consulting services provided.

We had an equity investment in Upstate until October 2004. We paid Upstate $113,000, $139,000 and $46,000 for royalties and $89,000, $51,000 and $132,000 for inventory in the years ended December 31, 2004, 2003 and 2002, respectively. At December 31, 2004, we owed Upstate $11,000 for royalties payable.

We have an equity investment in Aviva Biosciences Corporation ("Aviva"). For the year ended December 31, 2004, we purchased $845,000 of inventory from Aviva. At December 31, 2004, accounts payable to Aviva was $119,000.

We lease facilities from our Chief Technology Officer ("CTO"). For the year ended December 31, 2004, we paid our CTO $35,000 in rent.

Note 12. Subsequent Event

In February 2005, we repurchased 397,000 shares of our common stock for approximately $8.4 million under our stock repurchase program. These shares will be accounted for as treasury stock, at cost.

On March 9, 2005, we completed the purchase of certain assets from Xsira Pharmaceuticals, Inc. ("Xsira") relating to the Transfluor® technology, a cell-based fluorescent assay system for monitoring the function of G-protein coupled receptors, pursuant to an Asset Purchase Agreement for $11.0 million in cash. Pursuant to the terms of the Asset Purchase Agreement, we paid Xsira $8.25 million on March 9, 2005, with $1.1 million of the $11.0 million purchase price deposited into an escrow account to secure certain indemnification, compensation and reimbursement obligations of Xsira. We have agreed to pay the remaining $1.65 million of the $11.0 million purchase price upon the completion of Xsira's training of our employees on the use of the Transfluor technology and the transfer of certain Transfluor technology-related biological materials, scientific and technical documents, and promotional materials.

Note 13. Quarterly Financial Data (Unaudited)

Summarized quarterly financial data is as follows:

	First	Second	Third	Fourth
	(In thousands, except per share amounts)			
Fiscal 2004				
Revenues	$27,337	$32,205	$41,502	$47,485
Gross profit	17,095	20,130	25,700	29,331
Net income (loss)	1,430	2,505	(1,268)	14,567
Basic net income (loss) per share	0.10	0.18	(0.07)	0.84
Diluted net income (loss) per share	0.10	0.17	(0.07)	0.81
Fiscal 2003				
Revenues	$24,550	$28,505	$29,276	$33,250
Gross profit	15,022	17,921	18,513	20,870
Net income	721	1,781	2,279	2,961
Basic net income per share	0.05	0.12	0.15	0.20
Diluted net income per share	0.05	0.12	0.15	0.20

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS
(IN THOUSANDS)

Description	BALANCE AT BEGINNING OF YEAR	CHARGED TO COSTS AND EXPENSES	DEDUCTIONS	BALANCE AT END OF YEAR
Allowance for doubtful accounts receivables				
Year ended December 31, 2002	$1,148	$ —	$(714)	$434
Year ended December 31, 2003	$ 434	$ 77	$(103)	$408
Year ended December 31, 2004	$ 408	$436(A)	$(505)	$339

(A) Of this amount, $206,000 in reserves was associated with receivables acquired from Axon (see Note 4).

exhibit index

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
2.1(1)	Form of Agreement and Plan of Merger between the Registrant and Molecular Devices Corporation, a California Corporation
2.2(2)	Stock and Asset Purchase Agreement, dated as of May 17, 1999, among Molecular Devices Corporation, a Delaware corporation, Helge Skare, Wiel Skare, Steinar Faanes and Sten Skare, each an individual resident in Norway, Skatron Instruments AS, a Norwegian company, and Skatron Instruments, Inc., a Virginia corporation
2.4(5)	Agreement and Plan of Merger and Reorganization dated as of June 7, 2000 by and among Molecular Devices Corporation, Mercury Acquisition Sub, Inc. and LJL BioSystems, Inc.
2.5(11)	Stock Purchase Agreement dated as of November 14, 2000 by and among JCR Pharmaceuticals, K.K. and Molecular Devices Corporation
2.6(12)	Stock Purchase Agreement dated as of July 6, 2001 by and among Molecular Devices, Cytion S.A., Jean-Pierre Rosat (as agent for the stockholders of Cytion) and each of the stockholders of Cytion.
2.7(13)	Stock Purchase Agreement dated as of June 1, 2002 by and among Molecular Devices, Universal Imaging Corporation, Theodore Inoue (as agent for the stockholders of Universal Imaging Corporation) and each of the stockholders of Universal Imaging Corporation.
2.8(15)	Agreement and Plan of Merger and Reorganization, dated as of March 20, 2004, by and among Molecular Devices Corporation, Astros Acquisition Sub I, Inc., Astros Acquisition Sub II, LLC and Axon Instruments, Inc.
2.9(16)	Amendment to Agreement and Plan of Merger and Reorganization, dated as of May 21, 2004, by and among Molecular Devices Corporation, Astros Acquisition Sub I, Inc., Astros Acquisition Sub II, LLC and Axon Instruments, Inc.
3.1(1)	Amended and Restated Certificate of Incorporation of Registrant
3.2(1)	Bylaws of the Registrant
3.3(8)	Certificate of Amendment to Certificate of Incorporation
4.1(1)	Specimen Certificate of Common Stock of Registrant
10.1(1)*	1988 Stock Option Plan
10.2(1)*	Form of Incentive Stock Option under the 1988 Stock Option Plan
10.3(1)*	Form of Supplemental Stock Option under the 1988 Stock Option Plan
10.4(8)*	1995 Employee Stock Purchase Plan
10.6(1)*	Form of Nonstatutory Stock Option under the 1995 Non-Employee Directors' Stock Option Plan
10.8(1)*	Form of Incentive Stock Option under the 1995 Stock Option Plan
10.9(1)*	Form of Nonstatutory Stock Option under the 1995 Stock Option Plan
10.10(1)*	Form of Early Exercise Stock Purchase Agreement under the 1995 Stock Option Plan
10.11(1)*	Form of Indemnity Agreement between the Registrant and its Directors and Executive Officers
10.19(17)*	Amended Key Employee Agreement for Joseph D. Keegan, Ph.D., dated July 29, 2004.
10.20(3)	Exclusive License and Technical Support Agreement dated August 28, 1998 by and between the Registrant and Affymax
10.21(3)*	Employee Offer Letter for Timothy A. Harkness
10.24(17)*	1995 Non-Employee Director's Stock Option Plan, as amended
10.25(17)*	1995 Stock Option Plan, as amended
10.26(6)*	Employee Offer Letter for Patricia Sharp
10.27(7)*	LJL BioSystems 1994 Equity Incentive Plan and Forms of Agreements
10.28(7)*	LJL BioSystems 1997 Stock Plan and Forms of Agreements
10.29(7)*	LJL BioSystems 1998 Directors' Stock Option Plan and Forms of Agreements
10.33(9)	Lease Agreement dated May 26, 2000 by and between Aetna Life Insurance Company and the Registrant
10.34(10)*	Change in Control Severance Benefit Plan

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
10.35(12)	Rights Agreement, dated October 25, 2001, among the Registrant and EquiServe Trust Company, N.A.
10.37(8)*	Key Employee Agreement for Tom O'Lenic
10.38(17)*	2001 Stock Option Plan, as amended
10.39(14)	Lease dated May 28, 2002 by and between The Irvine Company and the Registrant
10.40(14)*	Letter Agreement dated April 11, 2002 by and between the Registrant and Joseph D. Keegan, Ph.D.
10.41(14)*	Letter Agreement dated April 11, 2002 by and between the Registrant and Timothy A. Harkness
10.43*	Amended Key Employment Agreement for Timothy A. Harkness
10.44*	Employee Offer Letter for Alan Finkel, Ph.D.
10.45*	Employee Offer Letter for Steven Davenport
10.46*	Employee Offer Letter for Jan Hughes
10.47*	Amended Employee Offer Letter for Jan Hughes
10.48(18)*	Non-Employee Director Compensation Arrangements
10.49(19)*	Executive Officer Compensation Arrangements
21.1	Subsidiaries of the Registrant
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Certification required by Rule 13a-14(a) or Rule 15d-14(a).
31.2	Certification required by Rule 13a-14(a) or Rule 15d-14(a).
32.1**	Certifications required by Rule 13a-14(b) or Rule 15d-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C 1350).

(1) Incorporated by reference to the similarly described exhibit in our Registration Statement on Form S-1 (File No. 33-98926), as amended.

(2) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated June 30, 1998, and filed August 13, 1998.

(3) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated September 30, 1998, and filed November 13, 1998.

(5) Incorporated by reference to the similarly described exhibit in our Current Report on Form 8-K filed June 12, 2000.

(6) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated September 30, 2000 and filed on November 13, 2000.

(7) Incorporated by reference to the similarly described exhibit filed with LJL BioSystems' Registration Statement on Form S-1 (File No. 333-43529) declared effective on March 12, 1998.

(8) Incorporated by reference to the similarly described exhibit in our Form 10-K Annual Report dated December 31, 2001 and filed on April 1, 2002.

(9) Incorporated by reference to the similarly described exhibit in our Form 10-K Annual Report dated December 31, 2000 and filed on March 30, 2001.

(10) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated March 31, 2001 and filed on May 11, 2001.

(11) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated June 30, 2001 and filed on August 14, 2001.

(12) Incorporated by reference to the similarly described exhibit in our Current Report on Form 8-K filed October 30, 2001.

(13) Incorporated by reference to the similarly described exhibit in our Current Report on Form 8-K filed on June 12, 2002.

(14) Incorporated by reference to the similarly described exhibit in our Form 10-K Annual Report dated December 31, 2003 and filed on March 27, 2003.

(15) Incorporated by reference to the similarly described exhibit in our Current Report on Form 8-K filed on March 22, 2004.

(16) Incorporated by reference to the similarly described exhibit in our Registration Statement on Form S-4 (File No. 333-114934), as amended.

(17) Incorporated by reference to the similarly described exhibit in our Form 10-Q Quarterly Report dated September 30, 2004, and filed on November 9, 2004.

(18) Incorporated by reference to the information in our Registration Statement on form S-4 (File No. 333-114934), as amended, under the heading "Molecular Devices Executive Compensation — Compensation of Directors."

(19) Incorporated by reference to the information in our Current Report on Form 8-K filed February 23, 2005 under the heading "Item 1.01. Entry Into a Material Definitive Agreement."

* Management contract or compensatory plan or arrangement.

** The certification attached as Exhibit 32.1 accompanies the Annual Report on Form 10-K pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

Corporate information

Molecular Devices Corporation

Board of Directors

Joseph D. Keegan, Ph.D.
President and
Chief Executive Officer
Molecular Devices Corporation

Moshe H. Alafi
General Partner
Alafi Capital Company

David L. Anderson
Managing Director
Sutter Hill Ventures

A. Blaise Bowman
Chairman
Matrix Corporation

Carl Goddard, Ph.D.
Chairman
Cerprobe, Inc., and Aryx Pharmaceuticals

Peter L. Marion
Independent Investor

Bradford M. McConnell, Ph.D.
Director, Molecular Devices Corporation
Professor Emeritus, Stanford University

Elliot Waltz, Ph.D.
Independent Investor

Corporate Officers

Joseph D. Keegan, Ph.D.
President and
Chief Executive Officer

Timothy A. Harkness
Senior Vice President and
Chief Financial Officer

Carl Linkel, Ph.D.
Senior Vice President and
Chief Technology Officer

Joye Davenport
Vice President
European Operations

Mark E. Hughes
Vice President
Worldwide Marketing

Gillian M. K. Humphries, Ph.D.
Vice President
Strategic Affairs

Robert J. Murray
Vice President
Operations

Thomas J. O'Lenic
Vice President
North American Sales and Service

Patricia C. Sharp
Vice President
Human Resources

J. Richard Sportsman, Ph.D.
Vice President
Assay and Reagent R&D

Worldwide Offices

United States of America

Corporate Headquarters
Molecular Devices Corporation
1311 Orleans Drive
Sunnyvale, California 94089-1136

Molecular Devices Corporation
402 Boot Road
Downingtown, Pennsylvania 19335

Molecular Devices Corporation
3280 Whipple Road
Union City, California 94587

United Kingdom

Molecular Devices Ltd.
135 Wharfedale Road
Winnersh Triangle
Wokingham RG41 5RB UK

Germany

Molecular Devices GmbH
Gutenbergstrasse 10
85737 Ismaning
München, Germany

Japan

Nihon Molecular Devices
Crest Takebashi Building
3-21 Kanda Nishiki-cho, Chiyoda-ku,
Tokyo, 100-0054
Japan

South Korea

Molecular Devices Korea, LLC
Sungnam Bld. 3FL Rm. 302, 1321-1
Seocho-Dong, Seocho2-gu
Seoul, 137-857
South Korea

China

Molecular Devices Shanghai Rep Office
Unit A-K, Floor 24, PuFa Tower #588
Pudong Rd.(S), Pudong New Area
Shanghai
P.R. China 200120

Norway

Molecular Devices Skatron
Solasletta 3
3408 Tranby
Norway

Independent Auditors

Ernst & Young LLP
1001 Page Mill Road
Building 1, Suite 200
Palo Alto, California 94304

Legal Counsel

Cooley Godward LLP
5 Palo Alto Square
3000 El Camino Real
Palo Alto, California 94306-2155

Stockholder Inquiries

EquiServe Trust Company, N.A.
P.O. Box 219045
Kansas City, Missouri 64121-9045
Tel: 816.843.4299
www.equiserve.com

Investor Relations

Molecular Devices Corporation welcomes inquiries from its stockholders and other interested investors. Additional copies of this report or other financial matters will be furnished without charge upon request to:

Timothy Harkness
Tel: 408.747.3533
Fax: 408.747.3696
Email: ir@moldev.com

Annual Meeting

The Annual Meeting of Stockholders will be held at 10:30 a.m. on May 26, 2005, at the Company's corporate headquarters, located at 1311 Orleans Drive, Sunnyvale, California. Those unable to attend are invited to address questions and comments to Timothy Harkness at the Company's headquarters.

Stock Trading

The Company's common stock is traded on the Nasdaq stock market under the symbol MDCC.

Stock Prices

2004	Q1	Q2	Q3	Q4
High	22.32	19.70	24.82	25.30
Low	17.64	17.05	17.85	18.82

2003	Q1	Q2	Q3	Q4
High	17.05	18.03	20.31	20.38
Low	10.97	11.20	15.51	17.76

The Company has never paid any cash dividends on its capital stock and does not anticipate paying cash dividends for the foreseeable future.

World Wide Web Home Page

www.moleculardevices.com

This Annual Report contains "forward-looking" statements. For this purpose, any statements contained in this Annual Report that are not statements of historical fact may be deemed to be forward-looking statements. Words such as *believes, anticipates, plans, predicts, expects, estimates, intends, will, continue, may, potential, should* and similar expressions are intended to identify forward-looking statements. There are a number of important factors that could cause our results to differ materially from those indicated by these forward-looking statements, including, among others, risks detailed from time to time in the Company's SEC reports, including the Company's Annual Report on Form 10-K for the year ended December 31, 2004. The Company assumes no duty to update any of the forward-looking statements after the date of this Annual Report or to conform these statements to actual results.

United States
Molecular Devices Corporation
Corporate Headquarters
1 800 635 5577 1 408 747 3601

Molecular Devices Corporation
Downingtown Pennsylvania
1 610 873 5900 1 610 873 5498

Molecular Devices Corporation
Union City California
1 510 675 6200 1 510 675 6201

United Kingdom
Molecular Devices Ltd
t +44 1 18 944 8000 f +44 1 18 944 8001

Germany
Molecular Devices GmbH
t +49 89 96050 400 f +49 89 96050 4444

Japan
Nihon Molecular Devices
t +81 3 5282 0281 f +81 3 5282 0282

South Korea
Molecular Devices Korea Ltd
t +82 2 3471 8631 f +82 2 3471 8634

Norway
Molecular Devices Norway
t +47 32 85 85 00 f +47 32 85 85 01

www.moleculardevices.com