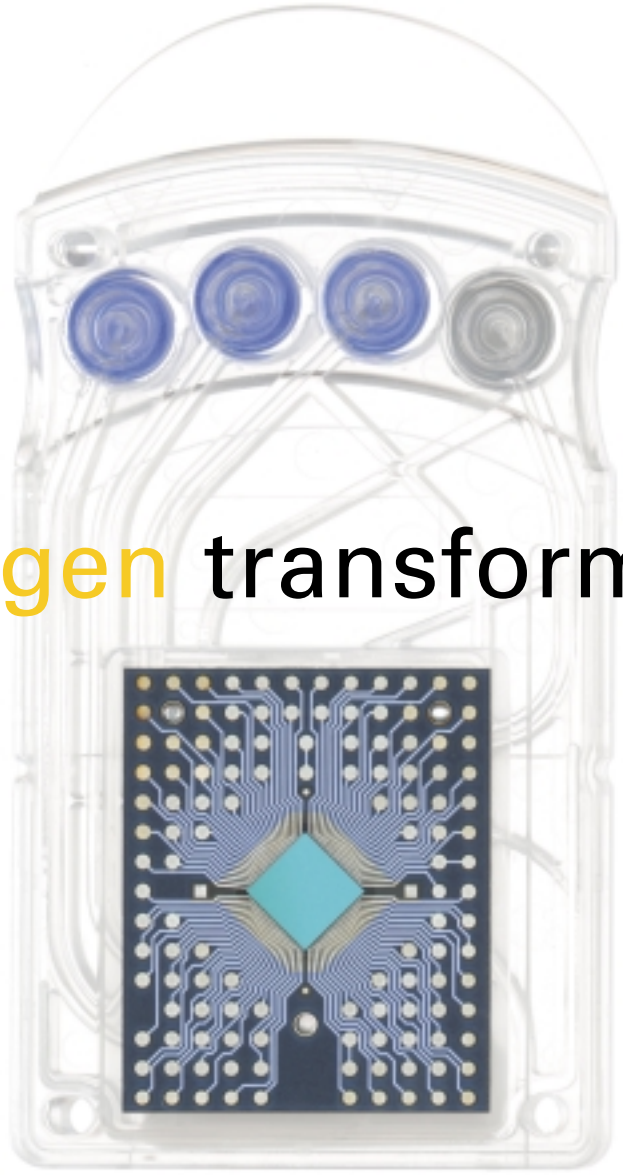
Nanogen transforms

Nineteen Ninety-Nine Annual Report



genetic data into biological

THE CHIP

The NanoChip is an electronic microchip that consists of test sites, arranged in an array, which can be individually manipulated electronically from the workstation.

THE CARTRIDGE

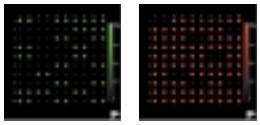
The consumable NanoChip cartridge consists of a proprietary semiconductor microchip with electrical and fluidic connections to the instrument.

THE LOADER

The loader will allow the user to electronically address their own probes to test sites on up to four cartridges simultaneously.

DATA OUTPUT

Within minutes of inserting the bar-coded cartridge for analysis, easy-to-read and interpret output is available. Data can be automatically down-loaded to network systems and to stan-dard software spread-sheet packages.



insight. Our core technology

THE READER

The reader is a fully automated instrument that controls all aspects of microchip operations, process-ing, detection and reporting.

Nanogen, Inc. researches, develops, manufactures and intends to market instruments and consumables to facilitate break-through genetic research. We integrate advanced microelec-tronics and molecular biology into core technologies with broad, diverse applications in genomics, biomedical research, medical diagnostics, drug discovery and other attractive markets.

The NanoChip™ molecular biology workstation, an inte-grated bioassay system that uniquely bridges the gap between early-stage scientific research and actual clinical practice, delivers exceptionally accurate, versatile, efficient and user-friendly analytic capability. Nanogen's focus is on translating this genomic data into useful information by providing the tools that simplify genetic research.

In 1999, we validated our technology at three success-ful beta sites, upgraded our products and expanded ongoing research partnerships. We since have signed a manufacturing and distribution agreement with Hitachi for the NanoChip™ molecular biology workstation, expected to debut in 2000.

Microelectronics Branch of electronics devoted to the design and development of small electronic devices that consume little electric power. Molecular Biology A branch of biology dealing with the organization of living matter and especially with the molecular basis of inheritance and protein synthesis. Genomics Study of genes and their function.

In fiscal 1999, Nanogen, Inc. completed its transformation from a business focused exclusively on research and development to one that is now on the verge of commercializing its first products. Among other milestones, we significantly upgraded our proprietary NanoChip™ molecular biology workstation, validated its performance at three successful beta sites, finalized a major manufacturing and distribution agreement and extended the scope of our primary research-and-development collaboration. The result: Nanogen now is positioned for the dynamic, customer-driven year we believe 2000 can become.

1999 Highlights

System Enhancements On the technological front, we focused on refining the NanoChip™ molecular biology workstation to serve initial target markets in genomics and biomedical research. Intensive federal, academic and corporate efforts now are focused on genomics – the process of discovering, identifying and analyzing the genetic sequences that define all living things – in an effort to decode and understand the functions of DNA. As a result, markets ranging from core biomedical research to point-of-care medical diagnostics are predicted to expand significantly in the coming decade.

Our 1999 efforts yielded second-generation versions of the system's two automated instruments: the electronic "addressing station" and the "fluorescent reader." We meanwhile reduced the number of parts in the NanoChip™ cartridge by 75 percent. The upgraded, single use, consumable cartridge on which each array is addressed now is as capable as its predecessor, yet far more manufacturable.

Our marketing plan initially targets scientists and genomics laboratories seeking a new standard for single nucleotide polymorphism (SNP) scoring and analysis of genetic repeats, such as STRs. SNPs, the genetic variations that are believed to account for physical and other biologically-based differences among individuals, offer important markers for disease susceptibility, drug reactivity and other crucial medical information. Beta testing in 1999 confirmed the NanoChip™ system's exceptional accuracy, flexibility and ease-of-use in SNP scoring – advantages we believe will provide a competitive market edge and significant value for our targeted markets. STRs, micro-satellite, and other genetic variants are highly characteristic and useful as markers and for identification.

Beta Sites Nanogen's beta sites represented three distinct markets: genomics, biomedical research and applied human identity testing. Researchers at the University of Texas (UT) Southwestern Medical Center demonstrated the NanoChip™ system's ability to accurately identify genetic disease markers. Biomedical researchers at the world-renowned Mayo Clinic validated the system's exceptionally high accuracy for pharmacogenomics. In addition, human identity testing performed by leading forensics researchers at The BODE Technology Group pointed to Nanogen's longer-term utility for criminal identification.

In each case, the NanoChip™ system proved exceptionally accurate for identifying SNPs and short tandem repeats (STRs) – patterns in the DNA sequence that can be mapped for human identification. In addition, a study jointly conducted on blinded samples with the highly regarded National Cancer Institute, while not a beta site, likewise demonstrated the system's superb accuracy, and resulted in a cover story for the prestigious scientific journal, *Nature Biotechnology*.

Corporate Partnerships In September 1999, we announced the expansion of our drug discovery efforts with Aventis (formerly Hoechst AG), one of the world's largest pharmaceutical suppliers. The agreement with its Aventis Research and Technology unit adds new programs, focused on gene expression and high-throughput drug target screening tools, to our two-year-old collaboration. In addition, the new programs enable Nanogen to retain full commercialization

sets the standard for precise,

Pharmacogenomics The science of understanding the correlation between an individual patient's genotype (genetic make-up) and their response to drug treatment. SNP Scoring The process of determining a particular SNP's role in disease and/or drug response. Biomedical Research Branch of scientific research dealing mainly with human health.

rights for jointly developed technologies. We look forward to building on our alliance that reflects the success of our mutual efforts to date.

Just after the close of the fiscal year, Nanogen signed an agreement with Hitachi for selected manufacturing and distribution of the NanoChip™ system. The agreement leverages Hitachi's considerable manufacturing expertise and Japanese marketing strength while facilitating valuable technology transfer between both companies. Significantly, Nanogen retains key rights in and outside Japan – including rights to develop and manufacture the NanoChip™ cartridge for Hitachi and any future partners worldwide.

2000 Outlook At Nanogen, we fully expect the coming 12 months to be the most exciting in our history. Our objectives include working closely with Hitachi to build

targeted genetic investigation.

commercial NanoChip™ instrument systems, creating a direct sales and support infrastructure, and cultivating acceptance among vital "early adopter" users – while continuing to explore other prospective corporate partnerships.

We are pleased to be joined by a new executive and two new Board members, whose deep commercialization and management expertise are ideally suited to helping Nanogen reach its next evolutionary stage. Michael Moore, senior vice president and general manager, comes to us following a lengthy management career at Hitachi and Perkin-Elmer. Val Buonaiuto, previously president and chief executive officer of Hitachi Instruments, Inc., and Stelios Papadopoulos, currently chief executive officer at CN Biosciences, Inc., an affiliate of K.G.a.A. Merck, add great strength to our Board. I also would like to welcome all of Nanogen's new employees, whose presence brings us to nearly 150 talented and knowledgeable individuals. We are pleased to have you with us.

We extend our thanks to each and every employee for your long hours, commitment and ongoing enthusiasm. We likewise appreciate our shareholders' confidence, and our beta site and alliance partners' collaborative spirit.

Nanogen's vision remains clear: to help researchers transform genetic data into powerful biological insight. The company intends to research, develop, manufacture and market instruments and consumables, independently and in conjunction with highly regarded corporate and governmental partners, to facilitate breakthrough genetic analysis. We believe Nanogen has the momentum, focus and sustainability to fulfill that mandate, and will continue striving to establish our technology as a standard for targeted genetic investigation.

I look forward to reporting to you on the results of this next, pivotal year.

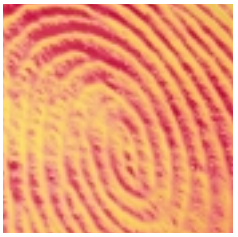
Howard C. Birndorf

Chairman of the Board, President and Chief Executive Officer

Pictured from left to right: Harry J. Leonhardt, Esq., Senior Vice President, General Counsel and Secretary; James P. O'Connell, Ph.D., Vice President, Business Development; Michael J. Heller, Ph.D., Chief Technical Officer; Howard C. Birndorf, Chairman of the Board, President and Chief Executive Officer; Kieran T. Gallahue, Senior Vice President, Chief Financial Officer; Michael Moore, Senior Vice President, General Manager; Clare L. Bromley, Senior Vice President, Sales and Marketing.

Mayo Clinic researchers used the NanoChip™ molecular biology workstation to test DNA samples from patients with leukemia, to identify SNPs which, in the future, may help doctors make life determining decisions regarding their therapeutic choices.

Three successful beta sites have



Highly accurate identification of SNPs and STRs can be used in combination to help advance genomic research and develop new tools for use in human identity testing.

validated the NanoChip™ system's

Beta Testing: Confirming System Capability

Beta testing for the NanoChip™ molecular biology workstation was conducted at three centers – the Mayo Clinic, the University of Texas Southwestern Medical Center and The BODE Technology Group – which represent the genomics, biomedical research and applied human identity testing markets, respectively. Testing began in 1999 and concluded in early 2000. In each case, results demonstrated very high levels of accuracy for SNP scoring or STR analysis.

In fact, SNP studies carried out by the Mayo Clinic and UT Southwestern Medical Center both reported 100 percent accuracy, surpassing results of the commonly-used techniques that each previously had considered their "gold standards." STR analysis results at the BODE Group, meanwhile, showed greater than 99.5% concordance with its current techniques – results that improved still further with subsequent NanoChip™ molecular biology workstation software upgrades.

Beta Testing Pre-market technical evaluation of a new product by a potential customer usually at the customer's location. Human Identity Testing Test procedures that are used to specifically identify individual persons in a population, for example, in paternity testing. "Gold Standards" The current state of-the-art testing method or methods, by which new techniques are judged.

Our fully integrated NanoChip™ instrument system consists of four major subsystems: (1) a free-standing microchip loader to perform electronic addressing of blank microchips, (2) a highly sensitive, laser-based fluorescence scanner, (3) a fluid handling subsystem and (4) computer hardware and software with a graphical user menu.

Government and commercial efforts to sequence the human and other genomes has generated a massive amount of genomic data which researchers must transform into useful genomic information. Nanogen will provide an enabling tool to help researchers transform that data into information.

benefits for near-term markets

Near-term Markets: Providing the "Next Bench" In the near term, Nanogen will seek to address genomic and clinical research markets – with a specific focus on SNP and other genetic variant confirmation and validation. Prospective customers include pharmaceutical companies; medical, academic and government research centers; and the burgeoning genomics industry.

For example, the NanoChip™ molecular biology workstation may prove highly valuable for the analysis of genes newly identified by the Human Genome Project and other human genome-related efforts. Using current methods, researchers are attempting to identify specific SNPs – potentially implicated in numerous diseases or conditions – from the thousands in the human genome. Nanogen's targeted array technology may enable them to focus on several dozen functional SNPs quickly, making the system an ideal "next bench" to currently available analytic methods.

Nanogen intends to combine SNP identification and analysis with similar capabilities for point mutations and STRs, each of which would be targeted at similar research markets.

Genetic Variant Changes in a genetic sequence from the norm, for example, a mutation that leads to a disease. Genes A length of DNA that codes for a particular protein. Point Mutations Individual DNA base substitutions in a gene that directly affects the structure or function of the protein product.


in genomics and clinical research.

Nanogen and Hitachi intend to combine their experiences and resources to design, manufacture and deliver reliable high technology solutions to our target markets.

We initiated a manufacturing

Manufacturing: A Premier Partner

Through its January 2000 manufacturing and distribution agreement with Hitachi, Nanogen joins forces with a company widely considered to be among the world's premier scientific equipment manufacturers. Under the agreement, which provides non-exclusive rights for Hitachi to design and manufacture NanoChip™ molecular biology workstation instrumentation, Hitachi will handle initial system manufacturing, while Nanogen will produce the NanoChip™ cartridge. The agreement unites Nanogen's entrepreneurial spirit and breakthrough research with Hitachi's substantial experience and credibility.

Among the benefits for Nanogen: Hitachi's broad experience in semiconductor, instrument and high-technology consumable manufacturing. Nanogen also stands to benefit as cost reductions and quality upgrades are integrated into the NanoChip™ molecular biology workstation over time.

"Gold Standards" The current state of-the-art testing method or methods, by which new techniques are judged. Scientific Equipment Equipment used by scientists to perform experiments, or to make measurements.

Nanogen's San Diego-based manufacturing facilities contain state-of-the-art clean room facilities to help ensure that the highest quality products are delivered to our customers.

collaboration with Hitachi, Ltd.,


and plan to evolve the system

Nanogen expects that additional features, such as sample-to-answer capabilities and portability may broaden the market potential from the research market to even larger markets that include drug discovery, diagnostics, forensics, agriculture and environmental applications.

STRs are the genetic sequences chosen by the U.S. government and other foreign governments to populate their national criminal identification databases. These databases are intended to provide nationwide tools for identifying repeat criminals by comparing a given piece of evidence or sample from a suspect with the sequences stored in the database.

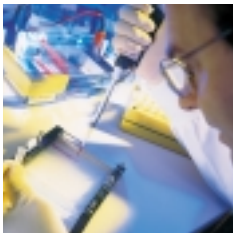
with future product upgrades

Opportunities: Smaller, Unique Products for Expanding Markets

Over the longer term, we intend to reduce the size of the NanoChip™ molecular biology workstation while broadening its scope – both by extending current products and by exploring new applications for Nanogen's core technology. Initial efforts may include manufacturing the NanoChip™ cartridge with customized genetic content already in place, as well as integrating sample processing and nucleic acid amplification. Such enhancements could enable researchers to identify and validate new targets with even greater efficiency.

Meanwhile, efforts are underway to miniaturize the NanoChip™ instrumentation into more specialized, portable systems targeted at the forensics, veterinary medicine, agricultural and environmental-quality industries. In short, Nanogen aims to evolve from user-defined cartridges to those addressed with custom genetic content; from benchtop to smaller, handheld systems; and from genomics and biomedical research to entirely new markets.

Customized Genetic Content Test arrays configured to gain specific genetic information. Sample Processing Preparing a sample for subsequent testing. Nucleic Acid Amplification Biochemical process by which one specific DNA sequence is multiplied many times over.



Nanogen's platform technology may provide a powerful tool which will clarify appropriate pathways for therapeutic intervention, identify and evaluate lead compounds and simultaneously assess the efficacy and toxicology of these compounds in model systems.

while expanding our research

Aventis: Exploring New Research Avenues

The September, 1999 agreement between Nanogen and Aventis expands current drug discovery and development efforts with two new programs. One program seeks to improve existing, passive methods for investigating gene expression by developing tools that utilize Nanogen's active electronic bioarray technology.

The second program aims to improve screening for analysis of a specific kinase, an enzyme critical for signaling and other cell processes. This electronic, high-throughput screening approach may enable pharmaceutical manufacturers to screen very large numbers of samples quickly and easily using Nanogen's proprietary technology.

Passive Methods Chemical processing methods that rely on only natural forces. **Gene Expression** The process by which the information in a gene is used to create proteins. **Active Electronic Bioarray** The use of electronic fields to accelerate and control DNA testing procedures.

partnerships. Our promising

"Aventis is committed to identifying and integrating leading edge drug discovery technologies. We saw scientific potential in Nanogen's platform that we have not seen with other technologies."

Pictured and quoted above, Norbert Windhab, Ph.D. of Aventis Research and Technologies

By continually adding applications and functionality to our platform technology we have the potential to serve broad and diverse commercial markets in the fields of genomics, biomedical research, medical diagnostics, drug discovery, forensics, agriculture, environmental testing and the electronics and telecommunications industries.

advanced technology strategy

Michael J. Heller, Ph.D., Nanogen co-founder and Chief Technical Officer

We are applying our core microelectronics biochip technology to potential applications in non-biological areas which include nanotechnology, data storage and semiconductor manufacturing. Based on the intrinsic self-assembly and programmable qualities of DNA, our technology uses electrical current to direct the heterogeneous integration of a number of molecular and nonmolecular components onto a microelectronic chip.

capitalizes on those strengths.

Intellectual Property and Advanced Technology: Deep Resources, Targeted Deployment

Nanogen already has cultivated exceptional depth in two vital portfolios: intellectual property and advanced technology. The company has been awarded twelve United States patents and seven foreign patents, and has a growing number of applications on file.

Three scientifically oriented publications – *Nature Biotechnology*, *Discover*, and *Popular Science* – also have featured Nanogen in a total of four cover stories in just two years. Meanwhile, Nanogen's advanced technology portfolio includes opportunities in microelectrophoresis, Internet-linked biosensing capabilities and, through its Nanotronics unit, non-biological applications such as semiconductor nanofabrication processes. The result: the potential for sustainable technological innovation and a wide range of potential product opportunities.

Electrophoresis A method in which an electric field is used to separate charged molecules. **Semiconductor Nanofabrication Processes** Manufacturing process for making small, computer-chip-type devices.

Nanogen is strongly positioned in advanced technology – with its sights focused sharply on the commercial horizon. Our mission: to integrate microelectronics and molecular biology into products with broad commercial appeal in genomics, biomedical research, genetic analysis, medical diagnostics, pharmacogenomics, drug discovery and law enforcement. Such technologies may cross historical boundaries between the semiconductor and life science industries.

As our 1999 beta testing confirmed, the NanoChip™ molecular biology workstation delivers fast, accurate, flexible and user-friendly capability for SNP scoring, a technique whose practical applications include the ability to predict possibly life-threatening drug reactions. Future product applications for SNPs and/or STRs may include clinical diagnostics, drug discovery and forensics.

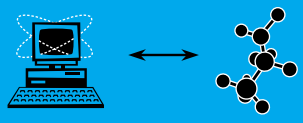
Our near-term market prospects also appear excellent. The Human Genome Project, along with complementary academic and corporate efforts, has sparked enormous interest in genomics research. Nanogen's focus on creating highly capable technological *tools* for targeted genomics research positions us well to serve that expanding industry.

Simply put, we seek to establish Nanogen's proprietary technology as a standard – both in terms of widespread acceptance and overall quality – for targeted genetic identification and analysis. We believe Nanogen is the right company, in the right industry, at the right time: now.

Microelectronics Branch of electronics devoted to the design and development of small electronic devices that consume little electric power.
Molecular Biology A branch of biology dealing with the physicochemical organization of living matter and especially with the molecular basis of inheritance and protein synthesis.

THE NANOCHIP™ SYSTEM

Delivering a Powerful Platform



Microelectronics, meet Molecular Biology. Nanogen uses semiconductor power to boost the efficiency of naturally-occurring biological processes. A brief guide to its operation:

About DNA Deoxyribonucleic acid, better known as DNA, is the prime carrier of genetic information. DNA determines which traits are passed from parent to child and how every cell in the body works. If unwound, the DNA within each of those cells would stretch an astonishing four feet in length.

While DNA was discovered in 1869, its role in genetic inheritance wasn't demonstrated until 1943. DNA only now is being decoded and analyzed to discover which genes, each consisting of a discrete sequence of DNA, carry the information needed to perform specific biological processes. Moreover, researchers are seeking to understand how that information may differ among individuals or be transformed within the same individual over time. The entire complement of genes within an organism is known as its genome – and is designed to replicate itself over and over as cells divide throughout the organism's lifetime.

The nucleotides that serve as DNA's chemical building blocks occur in so-called "base pairs" that match one another, within very specific parameters, to form the spiraling double helix easily recognizable from high school biology classes. There are estimated to be three billion base pairs in the human genome, and more than 99 percent of that sequence is believed to be identical from person to person. The remaining 1 percent difference consists of multiple types of genetic variations. One such category, single-base substitutions – called single nucleotide polymorphisms, or SNPs – represents the most common source of human genetic variation.

The precise sequence of bases within each gene, and their associated SNPs and other variable loci, determines such characteristics as eye color, height and the presence or absence of genetic-based diseases. Seemingly insignificant mismatches in that sequence can have profound consequences. An archetypal SNP, sickle-cell anemia, the devastating disease that can lead to intense pain, paralysis and young-adult death, occurs when a single base among those three billion is out of sequence.

But all SNPs aren't created equal. Some may be irrelevant, some simply may affect physical characteristics, while others may be potentially life-threatening alone or in the presence of certain drugs. Genomics and bioinformatics – the laboratory and statistical methods used to study organisms' genetic content – already have revealed thousands of functional and marker SNPs, which can provide critical early warning for individuals susceptible to genetic diseases or toxic drug reactions. What's more, it may be the combination of SNPs, rather than any single SNP, that determines their biological significance.

Pharmaceutical and diagnostic SNP research and development are likely to result in breakthrough drugs and clinical tests. Nanogen's targeted microarray technology enables researchers to pursue more efficiently the genomic and biomedical research that can lead to

"Base Pairs" Two complementary nucleotide bases joined together by chemical bonds.

THE NANOCHIP™ SYSTEM

Delivering a Powerful Platform

those advances. Among the system's key features: the ability to analyze multiple SNPs simultaneously, greatly simplifying the process of identifying and assessing SNP interactions.

About the System The NanoChip™ molecular biology workstation is a fully automated, multi-purpose molecular biology workstation that facilitates both SNP and STR analysis, yet fits on a standard laboratory bench. A unique, open-architecture design permits researchers to define, select and build their own test panels on the ready-to-address NanoChip™ cartridge that serves as the system's heart.

Every NanoChip™ cartridge contains an active electronic chip, which in turn holds test sites laid out in a geometric grid known as an array. Each test site can be controlled precisely and individually from the system's on-board computer. A permeation layer coated on the chip acts as the interface between its electrochemically active surface and the biological test environment.

The system takes advantage of naturally occurring positive and negative charges associated with most molecules, including DNA, to facilitate movement to and from – and concentration at – designated test sites. That electronic concentration feature greatly accelerates molecular binding at each site, providing a fast, efficient method for functional genomic testing.

In the future, the system may be expanded to include capabilities for gene expression and on-chip amplification. Gene expression involves analysis of genes operating in a specific biological process, such as why cells become malignant; on-chip amplification simplifies testing by amplifying genetic material, making variations easier to detect, and with greater reliability.

Integrated Operational Features The NanoChip™ system provides numerous features vital to conducting molecular bioassays, a process widely used to detect specific biochemicals, proteins or genes. For example:

Electronic Addressing Electronic addressing involves placing charged molecules at specific test sites. When a solution of DNA capture probes is introduced onto the microchip, the negatively-charged probes rapidly move to the selected positively charged sites, where they are concentrated and chemically bound. The microchip then is washed and, if desired, another solution of distinct probes can be added. Site by site, row by row, an array of specifically-bound probes is assembled on the microchip. Such user-definable microchip arrays potentially can be built more quickly and economically than current technologies allow.

Electronic Hybridization Following electronic addressing, the NanoChip™ system electronically moves and concentrates target molecules to one or more test sites. Increased concentration of sample DNA at each test site promotes rapid hybridization with the previously addressed complementary DNA capture probes. In contrast to conventional SNP and STR research methods, electronic concentration significantly accelerates the rate at which hybridization occurs. Because test molecules are concentrated electronically over their target sites, the system also reduces time required for identification and analysis.

Stringency Control Stringency control enables researchers to remove unbound and nonspecifically-bound DNA quickly and easily during hybridization, providing

Molecules Smallest particle of a compound that has all the chemical properties of that compound. **Functional Genomic Testing** Determining the function of a gene, or genes, once its sequence is known. **Malignant** Cancerous, or pre-cancerous cell.

COMMERCIALIZATION

Translating Research to Reality

quality control and ensuring that any bound pairs of DNA are truly complementary. Nanogen's core technology can use electronic, thermal or chemical techniques, depending on the application, for precise, accurate stringency control.

Electronic Multiplexing Nanogen's electronic multiplexing feature allows multiple test sites to be analyzed simultaneously from a single sample. The ability to control individual test sites permits biochemically unrelated molecules to be used simultaneously on the same microchip. In contrast, sites on a conventional DNA array cannot be controlled separately, and all process steps must be performed on an entire array. Nanogen's electronic technology delivers increased versatility over such conventional methods.

Strand Displacement Amplification Nanogen gained access to Strand Displacement Amplification (SDA) for certain applications through its relationship with Becton, Dickinson and Company. SDA simplifies accurate target detection using a proprietary process, which enzymatically amplifies very low numbers of diagnostic targets to exponentially higher levels. SDA's speed, simplicity and isothermal nature are ideally suited for use with Nanogen's technology.

Fluorescent Array Analysis After hybridization is complete, the NanoChip™ system provides accurate analysis via a built-in, programmable, fluorescent scanner. The microprocessor-controlled central operating system then scans, monitors, analyzes and reports the resulting information.

Commercialization: Translating Research to Reality We intend to deliver the first commercial NanoChip™ molecular biology workstations in 2000 and market those systems aggressively to key biomedical research-industry segments, including the emerging genomics industry. We'll also strive to advance the drug discovery and clinical diagnostic technologies we already have underway, and to translate those efforts into viable near-term products. Over time, we intend to add value to our existing products, such as manufacturing the NanoChip™ with genetic content in place, integrating amplification and sample processing, and miniaturizing the entire system.

Our business strategy, like our targeted-microarray technology, is both highly focused and flexible. In addition to broadening our initial product line, we intend to continue identifying, acquiring and incubating high-value technologies that cross disciplinary and industrial boundaries. The company likewise will continue exploring related or entirely new markets and applications, including forensics and veterinary medicine. Other prospective markets, such as the agricultural, water-quality and waste-monitoring industries, might benefit greatly from laptop and hand-held versions of the NanoChip™ system.

Significantly, Nanogen retains full worldwide commercialization rights to the NanoChip™ cartridge following the Hitachi agreement. As a single-use device, the cartridge – bar-coded to ease sample tracking and prevent multiple tests from accidentally being run on the same cartridge – is designed to ensure the accuracy of each new genetic test. We believe researchers will take advantage of the system's flexibility and accuracy to pursue successive, increasingly specific tests and in directions they might not have pursued with existing analytic techniques. That

Multiplexing The simultaneous analysis of multiple test results.

process likely will require multiple cartridges for each test, often within a single day.

Toward a Promising Future Our priorities in 2000 are clear. As of the first quarter, we successfully completed beta testing and initiated technology transfer to our partner, Hitachi, to begin system manufacturing. We now are in the process of building a highly experienced, cost-effective sales and marketing force to reach prospective customers directly, along with value-added resellers and other distributors to specific markets. Nanogen also expects to develop the applications and service infrastructure to support new customers, and to team with those customers to introduce the system into their genomic information-generating process.

In our drug discovery collaboration with Aventis Research and Technology, we're pursuing three programs that share a common thread: applying electronics to pharmaceutical research. The first, initiated in 1998, leverages both our microarray and Aventis R&T's synthetic nucleic acid technologies to develop rapid screening capabilities for large numbers of potential pharmaceutical compounds. In 1999, the Aventis relationship was expanded to include research and development for targeted gene expression tools and high-throughput drug screening devices.

Nanogen also has participated in several government-sponsored nanotechnology evaluations, and is incubating semiconductor fabrication and assembly technologies through our Nanotronics subsidiary.

In short, we're developing new technologies to round out our product portfolio in the near term and provide sustainable competitive advantage over the longer term. That effort includes expanding our product line from larger to smaller systems, as well as from research to promising new markets.

We believe Nanogen fills an emerging niche. Researchers using current sequencing and large-array technologies are discovering and screening genes, along with unique variations among those genes. Nanogen's precise microarray technology complements such systems by providing a "next bench" capability by which selected samples can be studied to produce even more detailed knowledge. What's more, as the Human Genome Project nears completion, the company is positioned ideally to assist researchers in deciphering the vast quantities of information that effort has produced.

Nanogen has the research and development foundation, existing markets, novel technology and strategic flexibility to give us strong commercial potential. We believe we also have the momentum, focus and sustainability to realize that goal – with the determination reflected in Nanogen's success to date.

Screening Testing many samples to identify traits that will be used to select samples for further testing. Nanotechnology Branch of science and engineering involved with very small structures and components.

SELECTED FINANCIAL DATA

(in thousands, except per share amounts)

The selected financial data set forth below with respect to our consolidated financial statements has been derived from the audited financial statements. The data set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and notes thereto appearing elsewhere herein:

YEARS ENDED DECEMBER 31,	1999	1998	1997	1996	1995
Consolidated Statement of Operations Data:					
Revenues:					
Sponsored research	**$ 5,688**	$ 5,461	$ 1,243	$ —	$ —
Contract and grant revenue	**2,431**	2,172	2,123	1,644	318
Total revenues	**8,119**	7,633	3,366	1,644	318
Operating expenses:					
Research and development	**25,260**	23,002	11,769	6,931	3,356
General and administrative	**9,097**	6,420	3,910	2,427	1,646
Acquired in-process technology	**—**	1,193	—	—	—
Total operating expenses	**34,357**	30,615	15,679	9,358	5,002
Loss from operations	**(26,238)**	(22,982)	(12,313)	(7,714)	(4,684)
Equity in loss of joint venture	**(996)**	(610)	—	—	—
Interest income (expense), net	**2,035**	2,650	975	(64)	96
Net loss	**$ (25,199)**	$ (20,942)	$(11,338)	$ (7,778)	$ (4,588)
Net loss per share — basic and diluted	**$ (1.39)**	$ (1.60)	$ (8.42)	$ (8.08)	$ (5.95)
Number of shares used in computing net loss per share — basic and diluted	**18,069**	13,097	1,347	963	771
Consolidated Balance Sheet Data:					
Cash and cash equivalents	**$ 41,021**	$ 62,245	$19,498	$16,775	$ 4,318
Working capital	**33,508**	57,701	16,775	14,853	3,931
Total assets	**50,785**	72,704	23,215	19,090	6,339
Capital lease obligations, less current portion	**2,831**	4,176	1,193	935	631
Accumulated deficit	**(72,630)**	(47,431)	(26,489)	(15,151)	(7,372)
Total stockholders' equity	**38,121**	61,051	18,599	15,680	4,950

This annual report contains forward-looking statements about our business and results of operations that are subject to risks and uncertainties that could cause our actual results to vary materially from those reflected in the forward-looking statements. Words such as "believes," "anticipates," "plans," "estimates," "future," "could," "may," "should," "expect," "envision," "potentially," variations of such words and similar expressions are intended to identify such forward-looking statements. Factors that could cause or contribute to these differences include those discussed (i) below under the caption "Risks and Uncertainties," and (ii) under the caption "Factors that May Affect Results" and elsewhere in the Company's Form 10-K for the fiscal year ended December 31, 1999 as filed with the Securities and Exchange Commission. Readers are cautioned not to place undue reliance on these forward-looking statements which speak only as of the date hereof. We disclaim any intent or obligation to update these forward-looking statements.

Overview

We integrate advanced microelectronics and molecular biology into a core technology platform with broad and diverse commercial applications in the fields of genomics, biomedical research, medical diagnostics, drug discovery, forensics, agriculture, environmental testing and potentially the electronics and telecommunications industries. The first application we have developed is an integrated bioassay system, the NanoChip molecular biology workstation, comprised of two automated instruments and a consumable cartridge. The NanoChip cartridge incorporating a proprietary microchip provides a flexible tool for the rapid identification and precision analysis of biological test samples containing charged molecules.

Since commencing operations in 1993, we have applied substantially all of our resources to our research and development programs. We have incurred losses since inception and, as of December 31, 1999, had an accumulated deficit of $72.6 million. We expect to incur significant losses over at least the next few years as we continue our research and product development efforts and attempt to commercialize our products.

We plan to introduce our first product into the marketplace in the second half of 2000. We anticipate our main sources of revenues through at least 2000 will be payments under our sponsored research agreements, contracts and grants. We believe our future operating results may be subject to quarterly fluctuations due to a variety of factors, including the achievement of milestones under our collaborative agreements, whether and when new products are successfully developed and introduced by us or our competitors, and market acceptance of products under development. Payments under sponsored research agreements may be subject to significant fluctuations in both timing and amount and therefore our results of operations for any period may not be comparable to the results of operations for any other period.

Results of Operations

Years ended December 31, 1999, 1998, and 1997

Revenue For the year ended December 31, 1999, revenue from sponsored research totaled $5.7 million compared to $5.5 million and $1.2 million for the years ended December 31, 1998 and 1997, respectively. Revenues are recorded under these arrangements as expenses are incurred. Payments received in advance under these arrangements are recorded as deferred revenue until the expenses are incurred. Sponsored research revenue recognized during the years ended December 31, 1999 and 1998 was earned in connection with our joint venture collaboration with Becton Dickinson, our research and development agreement with Aventis and our nonexclusive research and development agreement with Elan. We and Becton Dickinson are considering modifications to the joint venture to take advantage of potential third party opportunities on technology developed to date, as well as field changes which would allow the joint venture access to additional technologies or content in areas more strategically aligned with business opportunities. Further joint venture funding will be determined based on a final decision regarding such modifications and field charges. We have received no funding from Becton Dickinson since the third quarter of 1999, and are uncertain as to whether we will receive any additional funding from Becton Dickinson. Nanogen and Aventis have added two new technology development programs to the existing molecular recognition array development program. The two new programs will provide a maximum of $12.0 million in additional funding to us through December 31, 2001, including an up-front initiation fee of $2.0 million which was received during 1999 and recorded as deferred revenue. Nanogen and Elan have not yet agreed

upon specific program objectives with respect to their nonexclusive research and development program. We are uncertain if we will receive any additional funds from Elan. Sponsored research revenue recognized during the year ended December 31, 1997 was earned in connection with a research agreement with Becton Dickinson effective in May 1997 which was subsequently superceded by the joint venture collaboration entered into in October 1997.

We fund some of our research and development efforts through contracts and grants awarded by various federal and state agencies. Revenues are recognized under these contracts and grants as expenses are incurred.

Continuation of sponsored research agreements, contracts and grants is dependent upon us achieving specific contractual milestones. The recognition of revenue under sponsored research agreements, contracts and grants may vary from quarter to quarter and may result in significant fluctuations in operating results from year to year.

Research and Development Expenses Research and development expenses increased to $25.3 million during the year ended December 31, 1999 from $23.0 million and $11.8 million for the years ended December 31, 1998 and 1997, respectively. Research and development expenses include salaries, lab supplies, consulting, travel, facilities, product design and prototype development, and other expenditures relating to research and product development. The increases from year to year are attributable to costs associated with the development and refinement of engineering prototypes as we move toward commercialization of our first product. Additionally, the increases are attributable to the continued growth of research and product development efforts, including hiring of additional scientific, engineering and operations personnel, increased purchases of laboratory supplies, equipment and services to support our sponsored research programs, and expansion of research and development facilities. Research and development spending may increase over the next several years as our research and product development efforts continue.

General and Administrative Expenses General and administrative expenses totaled $9.1 million in 1999 compared to $6.4 million in 1998 and $3.9 million in 1997. The year-to-year increases from 1997 through 1999 are primarily due to increased personnel costs as the company expands its general and administrative organization, legal costs associated with enhancing and maintaining our intellectual property portfolio, the expansion of activities related to marketing our potential products, increased costs associated with operating as a public company, and to additional deferred compensation expense recognized during the year ended December 31, 1999 compared to 1998 and 1997. Deferred compensation represents the excess of the fair value for financial statement presentation purposes over the exercise price for common stock issuable on exercise of stock options. The increase in 1999 compared to 1998 is also due in part to severance costs related to certain employees. General and administrative expenses are expected to continue to increase as we expand our sales and marketing and general and administrative organizations and as we continue to enhance and maintain our intellectual property portfolio.

Acquired In-process Technology During the first quarter of 1998, we issued 200,000 shares of our Series D Convertible Preferred Stock at $6.00 per share in exchange for all of the outstanding shares of Nanotronics, Inc. This Series D Preferred Stock converted into 132,334 shares of common stock at our initial public offering. The in-process technology acquired relates generally to nanotechnology and molecular electronics. We recorded $1.2 million in expenses relating to acquired in-process technology during the year ended December 31, 1998.

Interest Income (Expense), Net We had net interest income of $2.0 million in 1999 compared to net interest income of $2.7 million and $975,000, in 1998 and 1997, respectively. The decrease in net interest income for 1999 compared to 1998 can be attributed to lower cash balances during 1999 compared to 1998, as a result of cash used in operations. The significant increase in 1998 compared to 1997 was primarily attributable to larger cash balances resulting from net proceeds received upon the completion of our initial public offering and concurrent private placement of equity securities in April 1998. Interest expense increased during 1999 compared to 1998 and 1997, due to greater amounts of equipment under capital leases in 1999 than in 1998 and 1997.

Equity in Loss of Joint Venture We recognized a loss of $996,000 and $610,000 for the years ended December 31, 1999 and 1998, respectively, from the joint venture formed in 1997 with Becton Dickinson, based on the loss allocation described in the joint venture agreement which states that losses will be allocated in proportion to and not to exceed cash contributions. There was no loss during 1997 as no cash contributions were made by us to the joint venture during the year ended December 31, 1997.

Liquidity and Capital Resources In April 1998, we completed our initial public offering of common stock generating net proceeds of $38.7 million. Concurrent with the initial public offering, we completed a private placement of our equity securities with Becton Dickinson, Aventis and Elan for net proceeds of $6.0 million, $10.0 million and $5.0 million, respectively. Prior to our initial public offering, we had financed our operations primarily through the net proceeds received from private placements of preferred equity securities totaling $44.1 million.

We fund most of our equipment acquisitions and leasehold improvements through capital leasing facilities. During 1999, we received proceeds from equipment and leasehold improvement financing of $881,000, compared to $5.7 million and $1.2 million of proceeds received during 1998 and 1997, respectively. We anticipate that we will continue to use capital equipment leasing or debt facilities to fund most of our equipment acquisitions and leasehold improvements. As of December 31, 1999, we had $4.4 million of available funding under our equipment lease lines.

Net cash used in operating activities was $18.6 million, $15.2 million and $9.8 million for 1999, 1998 and 1997, respectively. Cash used for operations was primarily related to the costs associated with developing prototypes of our initial product, the support of our expanding operations, including higher personnel costs, and legal fees relating to establishing and maintaining our intellectual property rights.

At December 31, 1999, we had $41.0 million in cash and cash equivalents. We expect that our existing capital resources, combined with anticipated revenues from potential product sales, sponsored research agreements, contracts and grants will be sufficient to support our planned operations through at least the next three years. This estimate of the period for which we expect our available sources of liquidity to be sufficient to meet our capital requirements is a forward-looking statement that involves risks and uncertainties, and actual results may differ materially. Our future liquidity and capital funding requirements will depend on numerous factors including, but not limited to, the extent to which our products under development are successfully developed and gain market acceptance, the timing of regulatory actions regarding our potential products, the costs and timing of expansion of sales, marketing and manufacturing activities, prosecution and enforcement of patents important to our business, the results of clinical trials, competitive developments, and our ability to maintain existing collaborations and to enter into additional collaborative arrangements. We have incurred negative cash flow from operations since inception and do not expect to generate positive cash flow to fund our operations for at least the next several years. We may need to raise additional capital to fund our research and development programs, to scale up manufacturing activities and expand our sales and marketing efforts to support the commercialization of our products under development. Additional capital may not be available on terms acceptable to us, or at all. If adequate funds are not available, we may be required to curtail our operations significantly or to obtain funds through entering into collaborative agreements or other arrangements on unfavorable terms. Our failure to raise capital on acceptable terms when needed could have a material adverse effect on our business, financial condition or results of operations.

In January 1998, we acquired all of the outstanding capital stock of Nanotronics. The in-process technology, which was acquired as a result of our purchase of Nanotronics, relates generally to nanotechnology and molecular electronics. Potential applications of the technology include high-density optical storage systems for electronics applications and self-assembly applications relating to microfabrication and nanofabrication. Nanotronics' research is exploratory in nature and at a very early stage. If technological feasibility is demonstrated, we expect to pursue corporate partnership opportunities. Given the early stage of the technology, we have not yet determined which applications may be developed and the extent of our resources to be committed to each such application.

Net Operating Loss Carryforwards As of December 31, 1999, we had federal and California net operating loss, or

NOL, carryforwards of $64.3 million and $7.5 million, respectively, and $2.9 million and $1.6 million of research and development, or R&D, tax credits available to offset future federal and state income taxes, respectively. The federal and California NOL carryforwards are subject to alternative minimum tax limitations and to examination by the tax authorities. The federal tax loss carryforwards will begin expiring in 2006, unless previously utilized, and the California tax loss carryforwards will continue to expire in 2000, unless previously utilized. The federal and California R&D tax credit carryforwards will begin expiring in 2007 unless previously utilized. We believe that our initial public offering combined with the concurrent private placement, which occurred in April 1998, may constitute a "change of ownership" under federal income tax regulations. As such, we may be limited in the amount of NOLs incurred prior to our initial public offering, which may be utilized to offset future taxable income. Similar limitations may also apply to utilization of R&D tax credits to offset taxes payable. However, we do not believe such limitations will have a material impact on our ability to utilize the NOLs. See Note 9 of Notes to Financial Statements.

Year 2000 Compliance In prior years, we discussed the nature and progress of our plans to become Year 2000 ready. In late 1999, we completed our remediation and testing of systems. As a result of those planning and implementation efforts, we experienced no significant disruptions in mission critical information technology and non-information technology systems and believe those systems successfully responded to the Year 2000 date change. We expensed less than $150,000 during 1999 in connection with remediating our systems. We are not aware of any material problems resulting from Year 2000 issues, either with our products under development, our internal systems, or the products and services of third parties. We will continue to monitor our mission critical computer applications and those of our suppliers and vendors throughout the year 2000 to ensure that any latent Year 2000 matters that may arise are addressed promptly.

Risks and Uncertainties The following risks and uncertainties should be read in conjunction with items discussed under the caption "Factors That May Affect Results" and elsewhere in the Company's Form 10-K for the fiscal year ended December 31, 1999 as filed with the Securities and Exchange Commission.

Our potential products are in various stages of development. Potential products that appear to be promising at early stages of development may not reach the market for a number of reasons. Substantially all of our revenues to date have been derived from our research and development agreements with major collaborators or from government contracts or grants. Prior to generating product revenues from these products, we must complete the development of our products. No assurance can be given that our product development efforts will be successful, that required regulatory approvals will be obtained or that any products, if introduced, will be capable of being produced in commercial quantities at reasonable costs or that customer acceptance of these products will be achieved. There can be no assurances that we will successfully commercialize, manufacture or market our products or ever achieve or sustain product revenues or profitability.

There can be no assurance that our existing collaborations will continue or be performed by the parties or that they will be successful. We expect to encounter intense competition from a number of companies that offer products in our targeted application areas, including competitors that have substantially greater financial, technical, research and other resources than Nanogen.

We face risks associated with companies whose products are still in development. These risks include, among others, our need for additional financing to complete our research and development programs and commercialize our technologies. We expect to incur substantial additional research and development expenses. We may seek additional sources of capital and liquidity through additional collaborative arrangements or through public or private financings. There can be no assurance such collaborations or financings will be available under favorable terms, if at all.

We believe that patents and other proprietary rights are important to our business. Our policy is to file patent applications to protect technology, inventions and improvements to our inventions that are considered important to the development of our business. The patent positions of healthcare and biotechnology firms, including ours, are uncertain and involve complex legal and technical questions for which important legal principles are largely unresolved.

CONSOLIDATED BALANCE SHEETS

(in thousands, except share data)

DECEMBER 31,	1999	1998
Assets		
Current assets:		
Cash and cash equivalents	**$ 41,021**	$ 62,245
Receivables and other current assets	**2,320**	2,933
Total current assets	**43,341**	65,178
Property and equipment, net	**6,154**	6,980
Acquired technology rights	**1,005**	—
Restricted cash	**219**	270
Other assets	**66**	276
	$ 50,785	$ 72,704
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	**$ 598**	$ 1,066
Accrued liabilities	**3,726**	1,433
Deferred revenue	**3,373**	3,065
Current portion of capital lease obligations	**2,136**	1,913
Total current liabilities	**9,833**	7,477
Capital lease obligations, less current portion	**2,831**	4,176
Commitments		
Stockholders' equity:		
Convertible preferred stock, $.001 par value, 5,000,000 shares authorized at December 31, 1999 and 1998; no shares issued and outstanding at December 31, 1999 and 1998	—	—
Common stock, $.001 par value, 50,000,000 shares authorized at December 31, 1999 and 1998; 18,990,799 and 18,835,461 shares issued and outstanding at December 31, 1999 and 1998, respectively	**19**	19
Additional paid-in capital	**113,574**	111,489
Deferred compensation	**(1,473)**	(1,512)
Notes receivable from officers	**(1,369)**	(1,514)
Accumulated deficit	**(72,630)**	(47,431)
Total stockholders' equity	**38,121**	61,051
	$ 50,785	$ 72,704

See accompanying notes.

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

YEARS ENDED DECEMBER 31,	1999	1998	1997
Revenues:			
Sponsored research	**$ 5,688**	$ 5,461	$ 1,243
Contract and grant revenue	**2,431**	2,172	2,123
Total revenues	**8,119**	7,633	3,366
Operating expenses:			
Research and development	**25,260**	23,002	11,769
General and administrative	**9,097**	6,420	3,910
Acquired in-process technology	**—**	1,193	—
Total operating expenses	**34,357**	30,615	15,679
Loss from operations	**(26,238)**	(22,982)	(12,313)
Equity in loss of joint venture	**(996)**	(610)	—
Interest income, net	**2,035**	2,650	975
Net loss	**$(25,199)**	$(20,942)	$(11,338)
Net loss per share — basic and diluted	**$ (1.39)**	$ (1.60)	$ (8.42)
Number of shares used in computing net loss per share — basic and diluted	**18,069**	13,097	1,347

See accompanying notes.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

YEARS ENDED DECEMBER 31,	1999	1998	1997
Cash flows from operating activities:			
Net loss	**$(25,199)**	$(20,942)	$(11,338)
Adjustments to reconcile net loss to net cash used in operating activities:			
Acquisition of in-process technology	**—**	1,193	—
Equity in loss of joint venture	**996**	610	—
Net (gain) loss from sale of property and equipment	**24**	(13)	—
Depreciation and amortization	**1,709**	1,168	527
Amortization of deferred compensation	**1,773**	2,181	611
Stock based compensation expense	**237**	—	—
Interest capitalized on notes receivable from officers	**(74)**	(75)	(4)
Changes in operating assets and liabilities:			
Accounts payable	**(468)**	469	117
Accrued liabilities	**2,293**	424	(414)
Deferred revenue	**308**	2,053	1,012
Receivables and other assets	**(182)**	(2,291)	(326)
Net cash used in operating activities	**(18,583)**	(15,223)	(9,815)
Cash flows from investing activities:			
Purchase of equipment	**(32)**	(72)	(492)
Proceeds from sale of assets	**6**	29	—
Investment in joint venture	**(996)**	(610)	—
Net cash used in investing activities	**(1,022)**	(653)	(492)
Cash flows from financing activities:			
Decrease in restricted cash	**51**	89	50
Principal payments on capital lease obligations	**(2,003)**	(1,561)	(670)
Issuance of common stock	**218**	60,052	125
Note receivable payments from officers	**115**	—	—
Issuance of convertible preferred stock, net of issuance costs	**—**	43	13,525
Net cash provided by (used in) financing activities	**(1,619)**	58,623	13,030
Net increase (decrease) in cash and cash equivalents	**(21,224)**	42,747	2,723
Cash and cash equivalents at beginning of year	**62,245**	19,498	16,775
Cash and cash equivalents at end of year	**$ 41,021**	$ 62,245	$ 19,498
Supplemental disclosure of cash flow information:			
Interest paid	**$ 580**	$ 466	$ 225
Supplemental schedule of noncash investing and financing activities:			
Equipment acquired under capital leases	**$ 881**	$ 5,652	$ 1,159
Common stock issued in exchange for notes receivables from officers	**$ —**	$ 310	$ 1,057
Issuance of convertible preferred stock and warrants in exchange for in-process technology	**$ —**	$ 1,193	$ —
Exchange of notes receivable for acquired technology rights	**$ 1,005**	$ —	$ —
Deferred compensation related to stock options and restricted stock awards, net	**$ 1,734**	$ 1,370	$ 2,934

See accompanying notes.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands)

	CONVERTIBLE PREFERRED STOCK SHARES	CONVERTIBLE PREFERRED STOCK AMOUNT	COMMON STOCK SHARES	COMMON STOCK AMOUNT	ADDITIONAL PAID-IN CAPITAL	DEFERRED COMPEN-SATION	NOTES RECEIVABLE FROM OFFICERS	ACCUMULATED DEFICIT	TOTAL STOCK-HOLDERS' EQUITY (DEFICIT)
Balance at December 31, 1996	10,785	$ 11	1,832	$ 2	$ 30,886	$ —	$ (68)	$ (15,151)	$ 15,680
Issuance of common stock	—	—	207	—	129	—	—	—	129
Repurchase of common stock	—	—	(30)	—	(4)	—	—	—	(4)
Issuance of convertible preferred stock	2,899	3	—	—	13,522	—	—	—	13,525
Deferred compensation related to stock options	—	—	—	—	2,934	(2,934)	—	—	—
Amortization of deferred compensation	—	—	—	—	—	611	—	—	611
Exercise of stock options in exchange for notes receivable and accrued interest	—	—	1,175	1	1,056	—	(1,061)	—	(4)
Net loss	—	—	—	—	—	—	—	(11,338)	(11,338)
Balance at December 31, 1997	13,684	14	3,184	3	48,523	(2,323)	(1,129)	(26,489)	18,599
Issuance of common stock	—	—	555	1	329	—	—	—	330
Repurchase of common stock	—	—	(123)	—	(103)	—	90	—	(13)
Issuance of convertible preferred stock	232	—	—	—	1,236	—	—	—	1,236
Sale of common stock under initial public offering, net of expenses	—	—	3,900	4	38,731	—	—	—	38,735
Sale of common stock in private placement in conjunction with initial public offering	—	—	1,909	2	20,998	—	—	—	21,000
Conversion of preferred stock upon the completion of initial public offering	(13,916)	(14)	9,277	9	5	—	—	—	—
Deferred compensation related to stock options	—	—	—	—	1,370	(1,370)	—	—	—
Amortization of deferred compensation	—	—	—	—	—	2,181	—	—	2,181
Exercise of stock options in exchange for notes receivable and accrued interest	—	—	133	—	400	—	(475)	—	(75)
Net loss	—	—	—	—	—	—	—	(20,942)	(20,942)
Balance at December 31, 1998	—	—	18,835	19	111,489	(1,512)	(1,514)	(47,431)	61,051
Issuance of common stock	—	—	94	—	246	—	—	—	246
Repurchase of common stock	—	—	(73)	—	(114)	86	—	—	(28)
Cancellation of notes receivable related to unvested restricted stock	—	—	(116)	—	(104)	—	104	—	—
Restricted stock awards	—	—	251	—	1,820	(1,820)	—	—	—
Stock based compensation expense	—	—	—	—	237	—	—	—	237
Amortization of deferred compensation	—	—	—	—	—	1,773	—	—	1,773
Payments received and accrued interest on notes receivable from officers	—	—	—	—	—	—	41	—	41
Net loss	—	—	—	—	—	—	—	(25,199)	(25,199)
Balance at December 31, 1999	**—**	**$ —**	**18,991**	**$ 19**	**$ 113,574**	**$(1,473)**	**$(1,369)**	**$ (72,630)**	**$ 38,121**

See accompanying notes.

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Organization and Summary of Significant Accounting Policies

Organization and Business Activity Nanogen, Inc. ("Nanogen" or the "Company") was incorporated in California on November 6, 1991 as Nanophore, Inc. ("Nanophore"), a wholly-owned subsidiary of Nanotronics, Inc. ("Nanotronics"), and pursuant to a Plan of Corporate Separation and Reorganization, Nanophore issued shares of its common stock to the Nanotronics shareholders and commenced operations as Nanogen, Inc. on September 1, 1993. In November 1997, the Company reincorporated in Delaware. The Company was established to develop products which integrate advanced microelectronics and molecular biology into a platform technology with broad commercial applications in the fields of biomedical research, genomics, medical diagnostics, genetic testing and drug discovery. The Company operates in one business and operating segment.

Acquisition of Nanotronics, Inc. In January 1998, the Company consummated an Agreement and Plan of Merger with Nanotronics, Inc. ("Nanotronics"), pursuant to which a wholly owned California subsidiary of the Company merged with and into Nanotronics. Upon the consummation of the merger, the Company issued approximately 200,000 shares of its Series D Convertible Preferred Stock at $6.00 per share in exchange for all of the outstanding shares of Nanotronics. This Series D Preferred Stock converted into 132,334 shares of common stock in connection with the Company's initial public offering. The transaction has been accounted for using the purchase method. The operations and net assets of Nanotronics were not material to the Company's financial position or results of operations, but have been consolidated in the Company's financial statements since the date of acquisition. The technological feasibility of the acquired technology has not been established nor have alternative uses been identified, therefore, the purchase price of approximately $1.2 million was allocated to acquired in-process technology and has been reflected as a charge in the Company's statement of operations.

The following unaudited table shows the pro forma amounts as if the acquisition had occurred on January 1, 1997:

YEARS ENDED DECEMBER 31,	1998	1997
Revenue	$ 7,667	$ 3,699
Net loss	$(20,946)	$(11,474)
Net loss per share – basic and diluted	$ (1.60)	$ (8.52)

Cash and Cash Equivalents Cash and cash equivalents consist of cash and highly liquid investments which include debt securities with remaining maturities of three months or less when acquired.

Concentration of Credit Risk Cash and cash equivalents are financial instruments, which potentially subject the Company to concentration of credit risk. The Company invests its excess cash primarily in U.S. government securities and marketable debt securities of financial institutions and corporations with strong credit ratings. The Company has established guidelines relative to diversification and maturities to maintain safety and liquidity. These guidelines are reviewed periodically and modified to take advantage of trends in yields and interest rates. The Company has not experienced any material losses on its investments.

All of the Company's investments are with financial institutions and organizations with strong credit ratings with maturities of three months or less when acquired.

Restricted Cash During 1994, the Company obtained an irrevocable standby letter of credit in the amount of $463,775 to secure its building lease. The letter of credit is secured by a certificate of deposit, which is shown as restricted cash in the accompanying balance sheet. The letter of credit is reduced by approximately $50,000 annually, and had a balance of approximately $219,000 at December 31, 1999.

Property and Equipment Property and equipment is stated at cost and depreciated over the estimated useful lives of the assets, generally three to five years, using the straight-line method. Leasehold improvements are stated at cost and amortized over the shorter of the estimated useful lives of the assets or the lease term.

Acquired Technology Rights Acquired technology rights are recorded at cost and amortized on a straight-line basis over their estimated useful lives of five years.

Impairment of Long-Lived Assets In accordance with Statement of Financial Accounting Standards ("SFAS") No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of*, if indicators of impairment exist, the Company assesses the recoverability of the affected long-lived assets by determining whether the carrying value of such assets can be recovered through undiscounted future operating cash flows. If impairment is indicated, the Company will value the asset at fair value. While the Company's current and historical operating and cash flow losses are indicators of impairment, the Company believes the future cash flows to be received from the long-lived assets will exceed the assets' carrying value, and accordingly the Company has not recognized any impairment losses through December 31, 1999.

Revenue Recognition Contract, grant and sponsored research revenue are recorded as the costs and expenses to perform the research are incurred. Payments received in advance under these arrangements are recorded as deferred revenue until the expenses are incurred. Continuation of certain contracts, grants, and research agreements are dependent upon the Company achieving specific contractual milestones.

Contract and grant revenue from one customer amounted to approximately 13% of total revenues in 1999. Contract and grant revenue from a second customer amounted to approximately 8%, 10% and 35% of total revenues in 1999, 1998 and 1997, respectively. Additionally, sponsored research (see Note 10) was 70%, 72% and 37% of total revenue in 1999, 1998 and 1997, respectively.

Comprehensive Income (Loss) As of January 1, 1998, the Company adopted SFAS No. 130, *Reporting Comprehensive Income*. SFAS No. 130 requires that all components of comprehensive income, including net income, be reported in the financial statements in the period in which they are recognized. Comprehensive income is defined as the change in equity during a period from transactions and other events and circumstances from non-owner sources. Net income and other comprehensive income, including foreign currency translation adjustments, and unrealized gains and losses on investments, shall be reported, net of their related tax effect, to arrive at comprehensive income. Comprehensive loss was not different than net loss for the years ended December 31, 1999 and 1998.

Net Loss per Share The Company computes net income per share in accordance with SFAS No. 128, *Earnings per Share*. Under the provisions of SFAS No. 128, basic net income per share is computed by dividing the net income available to common stockholders for the period by the weighted average number of common shares outstanding during the period. Diluted net income per share is computed by dividing the net income for the period by the weighted average number of common shares outstanding during the period and dilutive potential common shares outstanding. Weighted average common shares outstanding during the period does not include shares issued pursuant to the exercise of stock options prior to vesting. Due to the losses incurred by the Company during the years ended December 31, 1999, 1998 and 1997, common stock equivalents resulting from the assumed exercise of outstanding stock options and warrants have been excluded from the computation of diluted net loss per share as their effect would be anti-dilutive.

Stock-Based Compensation As permitted by SFAS No. 123, the Company has elected to follow Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*, and related Interpretations ("APB 25"), in accounting for its employee stock options. Under APB 25, when the exercise price of the Company's employee stock options is equal to or exceeds the fair value of the underlying stock on the date of grant, no compensation expense is recognized.

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

Initial Public Offering In April 1998, the Company completed an initial public offering (the "offering") of 3,900,000 shares of common stock, providing the Company with net proceeds of approximately $38.7 million. All outstanding shares of convertible preferred stock outstanding at April 13, 1998 automatically converted into 9,277,275 common shares upon the closing of the offering.

Concurrently with the offering, the Company completed a private placement of 1,909,089 shares of its common stock to Becton, Dickinson and Company, Hoechst AG (through a subsidiary) and Elan Corporation, plc, resulting in net proceeds to the Company of $6.0 million, $10.0 million and $5.0 million, respectively.

2
Property and Equipment

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

DECEMBER 31,	1999	1998
Scientific equipment	$ 3,738	$ 3,130
Manufacturing equipment	42	—
Office furniture and equipment	2,156	2,030
Leasehold improvements	4,200	4,141
	10,136	9,301
Less accumulated depreciation and amortization	(3,982)	(2,321)
	$ 6,154	$ 6,980

3
Accrued Liabilities

Accrued liabilities are comprised of the following (in thousands):

DECEMBER 31,	1999	1998
Accrued compensation and benefits	**$ 2,034**	$ 754
Accrued product development costs	**944**	—
Other	**748**	679
	$ 3,726	$ 1,433

4
Commitments

Licensing and Research Agreements The Company is a party to licensing and research agreements with various entities whereby the Company is obligated to pay certain license fees and research funding. None of these agreements individually are considered material. Under some of these agreements, the Company may be required to pay royalties on future sales in the event that the Company incorporates the licensed technology in one or more of its potential commercial products.

Leases The Company leases its facilities and certain equipment under operating lease agreements that expire at various dates through 2005. Rent expense was $577,000, $532,000 and $461,000 in 1999, 1998, and 1997, respectively.

The Company leases certain equipment under capital lease obligations. Cost and accumulated amortization of equipment under capital lease were $9,953,000 and $3,872,000 at December 31, 1999 and $9,045,000 and $2,199,000 at December 31, 1998, respectively. Amortization of equipment under capital lease obligations is included in depreciation expense.

Annual future minimum obligations for operating and capital leases as of December 31, 1999 are as follows (in thousands):

	OPERATING LEASES	CAPITAL LEASE OBLIGATIONS
2000	$ 612	$2,555
2001	626	1,994
2002	651	660
2003	677	188
2004	705	130
Thereafter	178	—
Total minimum lease payments	$3,449	5,527
Less amount representing interest		560
Present value of future minimum capital lease obligations		4,967
Less amounts due in one year		2,136
Long term portion of capital lease obligations		$2,831

As of December 31, 1999, the Company has $4.4 million of available funding under equipment lease lines.

5
Related Party Transactions

In November 1998, the Company entered into a Standstill Agreement and Right of First Negotiation (the "Agreement") with Graviton, Inc. ("Graviton"), granting the Company an exclusive period of time to negotiate a license to certain technologies licensed to and/or developed by Graviton. In exchange for the Agreement, the Company advanced to Graviton through a secured loan the sum of $500,000. In May 1999, the Company advanced to Graviton through a secured loan an additional $500,000, the proceeds of which were to be used by Graviton in part to secure additional intellectual property rights which the Company could license. In December 1999, the Company entered into a Collaboration and License Agreement with Graviton. Pursuant to this agreement, the total loans of $1.0 million, plus accrued interest, were exchanged for license fees which are reflected as "acquired technology rights" in the accompanying balance sheet.

Mr. Birndorf, Chairman of the Board, Chief Executive Officer and President and a director of the Company, is also a director of and investor in Graviton. Additionally, Dr. Tina Nova, the Company's President and Chief Operating Officer during 1998 and 1999, is the spouse of the president of Graviton, Dr. Michael Nova. Together, Messrs. Birndorf and Nova hold a controlling ownership interest in Graviton. Given the interrelationship among the parties, the Company's Board appointed a committee of disinterested Board members to evaluate this opportunity. After full disclosure of the above-referenced interrelationships, the Committee determined that it was in the best interests of the Company to enter into the license agreement which was executed on December 15, 1999.

6
Stockholders' Equity

Warrants At December 31, 1999, there were outstanding warrants to purchase an aggregate of 20,000 shares of common stock at an exercise price of $2.25 per share which expire in April 2000. Pursuant to the research and development collaboration agreement with Aventis Research and Technologies, an affiliate of Hoechst AG ("Aventis"), (see note 10), the Company agreed to issue to Aventis a warrant to purchase 120,238 shares of common stock exercisable through March 2004 at an exercise price of $8.75 per share.

Stock Option Plans Under the Company's 1993 Stock Option Plan, as amended in April 1995, 654,671 shares of common stock were reserved for issuance upon exercise of stock options granted by the

Company. In April 1995, the Board of Directors adopted the 1995 Stock Option/Stock Issuance Plan under which 333,333 shares of common stock were reserved for issuance. In April 1996, an additional 650,000 shares of common stock were reserved for issuance under the 1995 Plan. The plans provide for the grant of stock options to officers, directors, employees and consultants to the Company.

In August 1997, the Board of Directors adopted the 1997 Stock Incentive Plan, under which 1,641,341 shares of common stock were reserved for issuance upon exercise of stock options granted by the Company. In November 1997 and June 1999, an additional 600,000 shares and 925,000 shares, respectively, were reserved for issuance under the 1997 Plan.

The exercise price of incentive stock options to be granted under the stock option plans shall not be less than 100% of the fair value of such shares on the date of grant. The exercise price of nonqualified stock options to be granted under the plans shall not be less than 85% of the fair value of such shares on the date of grant. Options granted prior to April 13, 1998 (the date of the initial public offering) are generally exercisable immediately; however, options granted subsequent to the initial public offering are generally exercisable only as they vest. All shares granted under the Stock Option Plans generally vest at the rate of one fourth after one year and the remainder ratably over the remaining three years. Options granted have a term of up to ten years.

As of December 31, 1999, 925,213 shares are available for future grant under the stock option plans. The following table summarizes stock option activity through December 31, 1999:

	NUMBER OF SHARES	PRICE PER SHARE	WEIGHTED AVERAGE EXERCISE PRICE PER SHARE
Outstanding at December 31, 1996	233,875	$.02 to $.15	$ .15
Granted	1,586,223	$.38 to $.90	$ .89
Exercised	(1,381,766)	$.15 to $.90	$ .86
Cancelled	(21,616)	$.15 to $.90	$ .53
Outstanding at December 31, 1997	416,716	$.02 to $.90	$ .60
Granted	1,344,874	$3.00 to $10.00	$4.48
Exercised	(248,479)	$.15 to $3.00	$1.98
Cancelled	(406,910)	$.15 to $10.00	$6.23
Outstanding at December 31, 1998	1,106,201	$.02 to $5.00	$2.94
Granted	849,326	$.001 to $21.875	$5.23
Exercised	(314,870)	$.001 to $4.75	$ .49
Cancelled	(381,389)	$.375 to $9.625	$3.75
Outstanding at December 31, 1999	1,259,268	$.02 to $21.875	$4.86

The Company has the option to repurchase, at the original issue price, unvested shares issued pursuant to early exercise of options in the event of termination of employment or engagement. At December 31, 1999, 651,116 shares issued under the stock option plans were subject to repurchase by the Company.

On September 25, 1998, the Compensation Committee of the Board of Directors authorized a plan for certain option holders whereby each holder could have exchanged all of his or her current vested and unvested options on a one-for-one basis for new options priced at the market value as of September 25, 1998. An aggregate of 365,463 options at an average price of $6.69 were exchanged for options with an exercise price of $3.8125 per share. All of these replacement options vest based on the original grant date. Generally, the replacement options were not exercisable until September 26, 1999, or under certain circumstances at an earlier date.

All replacement options are included in grants and cancellations in the above summary of stock option activity.

The Company recognized an aggregate of $6,124,000 through December 31, 1999 as deferred compensation for the excess of the fair value of the common stock issuable on exercise of such options over the exercise price. The deferred compensation expense is being recognized over the vesting period of the options. Compensation expense related to these options was $1,773,000, $2,181,000 and $611,000 for the years ended December 31, 1999, 1998 and 1997, respectively.

Following is a further breakdown of the options outstanding as of December 31, 1999:

RANGE OF EXERCISE PRICES	OPTIONS OUTSTANDING	WEIGHTED AVERAGE REMAINING LIFE IN YEARS	WEIGHTED AVERAGE EXERCISE PRICE	OPTIONS EXERCISABLE	WEIGHTED AVERAGE EXERCISE PRICE OF OPTIONS EXERCISABLE
$ .02 - $ .90	179,764	5.71	$ .36	179,764	$ .36
$3.00 - $ 3.94	482,652	8.50	$ 3.64	349,387	$3.57
$4.00 - $ 4.75	194,048	9.03	$ 4.39	46,399	$4.38
$5.00 - $ 6.97	87,029	8.41	$ 6.50	5,120	$5.73
$7.00 - $ 7.25	149,550	9.64	$ 7.08	—	$ —
$8.00 - $10.94	144,400	9.68	$ 9.28	4,000	$9.47
$21.88	21,825	10.00	$21.88	—	$ —
$ .02 - $21.88	1,259,268	8.47	$ 4.86	584,670	$2.71

Adjusted pro forma information regarding net loss is required by SFAS 123 and has been determined as if the Company had accounted for its employee stock options under the fair value method of SFAS 123. The fair value for these options was estimated at the date of grant using the Black-Scholes valuation model for option pricing with the following assumptions for 1999,

1998, and 1997: a risk-free interest rate of 6.0%, 5.75%, and 6.5%, respectively, a dividend yield of zero; volatility factors of the expected market price of the Company's common stock of 70%, 65%, and 65%, respectively, and a weighted average expected life of the option of five years.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options which have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. Because the Company's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options.

For purposes of adjusted pro forma disclosures, the estimated fair value of the options is amortized to expense over the vesting period. The Company's adjusted pro forma information is as follows (in thousands):

YEARS ENDED DECEMBER 31,	1999	1998	1997
Adjusted pro forma net loss	**$(26,443)**	$(21,379)	$(11,383)
Adjusted pro forma net loss per share	**$ (1.46)**	$ (1.63)	$ (8.45)

The weighted average fair value of options granted during 1999, 1998 and 1997 was $5.40, $2.68 and $.24 per share, respectively.

The pro forma effect on net loss for 1999, 1998 and 1997 is not necessarily indicative of potential pro forma effects on results for future years.

Restricted Stock Awards On July 27, 1999, the Board of Directors authorized the issuance of an aggregate of 251,000 shares of the Company's common stock to certain officers and key employees at a price per share of par value ($.001). All of these shares were purchased by the respective officers and key employees and are subject to repurchase if the officer or key employee leaves the Company prior to July 26, 2001. Repurchase rights as to certain of the shares lapse upon the attainment of certain performance milestones or upon a change in control. Deferred compensation aggregating $1,820,000 has been recorded for the excess of the fair market value of the stock on the date of the award over the purchase price per share and is being amortized over the restricted period.

These restricted shares have been included in the summary of stock option activity under the caption *Stock Option Plans* above.

Employee Stock Purchase Plan In November 1997, the Board of Directors approved the Employee Stock Purchase Plan (the "Purchase Plan"). A total of 300,000 shares of common stock have been authorized for issuance under the Purchase Plan. The Purchase Plan permits eligible employees of the Company to purchase shares of common stock, at semi-annual intervals, through periodic payroll deductions. Payroll deductions may not exceed 15% of the participant's base salary subject to certain limitations, and the purchase price will not be less than 85% of the lower of the fair market value of the stock at either the beginning of the applicable "offering period" or the last day of the accumulation period. Each offering period is 24 months long, with new offering periods commencing every six months, and an accumulation period is six months in duration. During the years ended December 31, 1999 and 1998, 35,216 and 26,783 shares, respectively, were issued under the Purchase Plan.

Shares Reserved for Future Issuance The following shares of common stock are reserved for future issuance at December 31, 1999:

Stock options	2,184,481
Employee stock purchase plan	238,001
Warrants	140,238
	2,562,720

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

7
401(k) Plan

The Company has a 401(k) defined contribution savings and retirement plan (the "Plan"). The Plan is for the benefit of all qualifying employees and permits employees voluntary contributions up to a maximum of 20% of base salary (as defined), subject to annual limits. The Board of Directors may, at its sole discretion, approve Company contributions. No such contributions have been made as of December 31, 1999.

8
Notes Receivable from Officers and Employees

The Company has advanced funds aggregating $240,000 to certain officers in connection with various employment agreements. These agreements provide for forgiveness of the advances over four-year periods. If an individual terminates the relationship with the Company, the unforgiven portion of the advances and any accrued interest are due and payable upon termination. These advances are secured by second trust deeds on the personal residences of the respective officers. As of December 31, 1999, $110,000 of these advances has been forgiven, $100,000 has been repaid to the Company in conjunction with the termination of the respective employee, and $30,000 is included in other assets. In addition, there are full-recourse notes receivable from certain officers totaling approximately $1.4 million related to stock purchase agreements.

9
Income Taxes

Significant components of the Company's deferred tax assets and liabilities as of December 31, 1999 and 1998 are shown below. A valuation allowance of $29,928,000 has been recognized to offset the deferred tax assets as realization of such assets is uncertain.

	1999	1998
Deferred tax assets:		
Net operating loss carryforwards	**$ 22,945**	$ 14,846
Research and development credits	**3,913**	2,350
Capitalized research expenses	**2,931**	1,981
Other	**522**	308
Total deferred tax assets	**30,311**	19,485
Valuation allowance for deferred tax assets	**(29,928)**	(19,250)
Net deferred tax assets	**383**	235
Deferred tax liabilities:		
Depreciation	**(383)**	(235)
Net deferred tax assets	**$ —**	$ —

At December 31, 1999, the Company has federal and California net operating loss carryforwards of approximately $64,319,000 and $7,534,000, respectively. The difference between the federal and California tax loss carryforwards is primarily attributable to the capitalization of research and development expenses for California tax purposes and the fifty percent limitation on California loss carryforwards. The federal tax loss carryforwards will begin expiring in 2006 unless previously utilized. The California tax loss carryforwards will continue to expire in 2000, unless previously utilized (approximately $1,332,000 expired in 1999). The Company also has federal and California research and development tax credit carryforwards of approximately $2,861,000 and $1,619,000, respectively, which will begin expiring in 2007 unless previously utilized.

Under Sections 382 and 383 of the Internal Revenue Code, the annual use of the Company's net operating loss and credit carryforwards may be limited because of cumulative changes in ownership of more than 50% which occurred during 1995 and 1997. However, the Company does not believe such limitations will have a material impact upon the ultimate utilization of these carryforwards.

10
Sponsored Research Agreements

Becton, Dickinson and Company The Company entered into a Master Agreement with Becton, Dickinson and Company ("Becton Dickinson") in October 1997 to develop and commercialize products in the field of IN VITRO nucleic acid-based diagnostic and monitoring technologies. Pursuant to this Master Agreement, Becton Dickinson and Nanogen agreed to form The Nanogen/Becton Dickinson Partnership (the "Partnership"). Pursuant to a General Partnership Agreement, Becton Dickinson and Nanogen have contributed to the Partnership their respective rights under a Collaborative Research and Development Agreement established in May 1997, certain Intellectual Property Licenses and, as of December 31, 1999 cash of approximately $8.6 million, of which approximately $7.0 million was paid by Becton Dickinson and approximately $1.6 million was paid by Nanogen. The amounts paid to the Partnership by Nanogen during the years ended December 31, 1999 and 1998 have been recorded as Nanogen's share of the joint venture's loss for those periods. The partners are considering modifications to the joint venture to take advantage of potential third party opportunities on technology developed to date. The partners are also considering field changes which would allow the joint venture access to

additional technologies or content in areas more strategically aligned with business opportunities. Further joint venture funding will be determined based upon a final decision regarding such modifications and field changes. The Company has received no research funding from Becton Dickinson since the third quarter of 1999, and it is uncertain whether the Company will receive any additional funding from Becton Dickinson.

Revenues are recognized under the agreements as expenses are incurred, and totaled $1.6 million, $2.5 million and $1.2 million for the years ended December 31, 1999, 1998 and 1997, respectively.

Aventis Research and Technologies In December 1997, the Company entered into an agreement with Aventis Research and Technologies, an affiliate of Hoechst AG ("Aventis"), for an exclusive research and development collaboration and the establishment of a joint venture relating to the development of molecular recognition arrays. Aventis also purchased common stock worth an aggregate of $10.0 million, at the offering price, in the private placement in April 1998.

In December 1998, the Company entered into a Collaborative Research and Development Agreement which, among other things, extended the guaranteed term of the research program from two to three years. As a result of the signing of this agreement, the Company agreed to issue to Aventis a warrant to purchase 120,238 shares of common stock exercisable through March 2004 at an exercise price of $8.75 per share. The Company has also agreed to issue to Aventis, upon the achievement of certain milestones, warrants to purchase up to approximately 360,000 additional shares of common stock at a 50 percent premium to the market price on the date the milestone is achieved. These warrants will have five-year maximum terms.

In September 1999, the Company announced the expansion of its drug discovery collaboration with Aventis. Two new technology development programs were added to the current program and will focus on the development of gene expression tools utilizing electronic bioarrays and the development of high throughput screening tools for kinase analyses. In total, the two new programs will provide a maximum of $12.0 million in additional funding to the Company through December 31, 2001, including an up-front initiation fee of $2.0 million which was received in the fourth quarter of 1999 and accounted for as deferred revenue.

Revenue is recognized under these agreements as expenses are incurred, and totaled $3.6 million and $2.1 million for the years ended December 31, 1999 and 1998, respectively. Funding received in advance of incurred expenses is recorded as deferred revenue until the expenses are incurred, and totaled $3.4 million at December 31, 1999.

Elan Corporation, plc In December 1997, the Company entered into an agreement with Elan Corporation, plc ("Elan") for a nonexclusive research and development agreement for the development of genomics and gene expression research tools. Pursuant to the agreement, Elan purchased Company common stock worth an aggregate of $5.0 million, at the initial public offering price, in the private placement in April 1998. Nanogen and Elan have not yet agreed upon specific program objectives with respect to the nonexclusive research and development program. The Company is uncertain as to whether the Company will receive any additional funding from Elan.

Revenue is recognized under the agreement as expenses are incurred, and totaled $568,000 and $929,000 for the years ended December 31, 1999 and 1998, respectively.

11
Contract and Grant Revenue

In September 1998, the Company was awarded a contract by the Space and Naval Warfare Systems Center San Diego ("SSC San Diego") for the Defense Advance Research Projects Agency in an amount that could total in excess of $7 million over the next five years. The contract award which was made by SSC San Diego for the Defense Advance Research Projects Agency includes over $2 million to be paid during the first two years, and options to extend the program for up to an additional three years that would pay the Company up to an additional $4.8 million. The goal of the program is to create an advanced miniaturized lab for biological warfare defense applications. Revenue is recognized under the agreement as expenses are incurred, and totaled $1.1 million and $109,000 for the years ended December 31, 1999 and 1998, respectively.

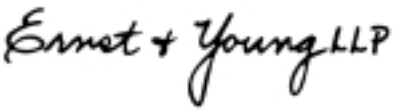
REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

The Board of Directors and Stockholders
Nanogen, Inc.

We have audited the accompanying consolidated balance sheets of Nanogen, Inc., as of December 31, 1999 and 1998, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 1999. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Nanogen, Inc. at December 31, 1999 and 1998 and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 1999, in conformity with accounting principles generally accepted in the United States.



San Diego, California
January 28, 2000

Pictured from left to right: John Havens, Ph.D., Director and Project Manager, Chemistry/Kinase; Stephen McCusker, Senior Director, Manufacturing; Richard Anderson, Ph.D., Vice President, Product Development; Bob Martinsons, Executive Director, Systems Development; James Prutow, Senior Director, Systems Development; Randy Berholtz, Senior Attorney; Leslie Tobias, Director, Human Resources; Christian Valcke, Ph.D., Director, Packaging/Research System; Ron Sosnowski, Ph.D., Associate Director, Assay Product Development; Dana Krzyston, CPA, Director of Finance

Board of Directors

Howard C. Birndorf
Chairman of the Board, President and Chief Executive Officer
Nanogen, Inc.

Val Buonaiuto
Senior Advisor
Hitachi, Inc.

Cam L. Garner
Chairman and Chief Executive Officer
Dura Pharmaceuticals, Inc.

David G. Ludvigson
Senior Vice President and Chief Operating Officer
Matrix Pharmaceuticals, Inc.

Thomas G. Lynch
Executive Vice President and Chief Financial Officer
Élan Pharmaceuticals, plc

Stelios B. Papadopoulos
Chief Executive Officer
CN Biosciences, Inc.

Officers

Howard C. Birndorf
Chairman, President and Chief Executive Officer

Clare L. "Bud" Bromley
Senior Vice President, Sales and Marketing

Kieran T. Gallahue
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Harry J. Leonhardt, Esq.
Senior Vice President, General Counsel and Secretary

Michael D. Moore
Senior Vice President and General Manager

James P. O'Connell, Ph.D.
Vice President, Business Development

Corporate Headquarters
Nanogen, Inc.
10398 Pacific Center Court
San Diego, CA 92121
(858) 410-4600
Email: www.nanogen.com

Corporate Counsel
Pillsbury Madison & Sutro LLP
San Francisco, California

Patent Counsel
Lyon & Lyon
Irvine, California

Independent Auditors
Ernst & Young LLP
San Diego, California

Transfer Agent
EquiServe
150 Royall Street
Canton, MA 02021
Phone: (781) 575-2193
Fax: (781) 575-2549
Email: www.equiserve.com

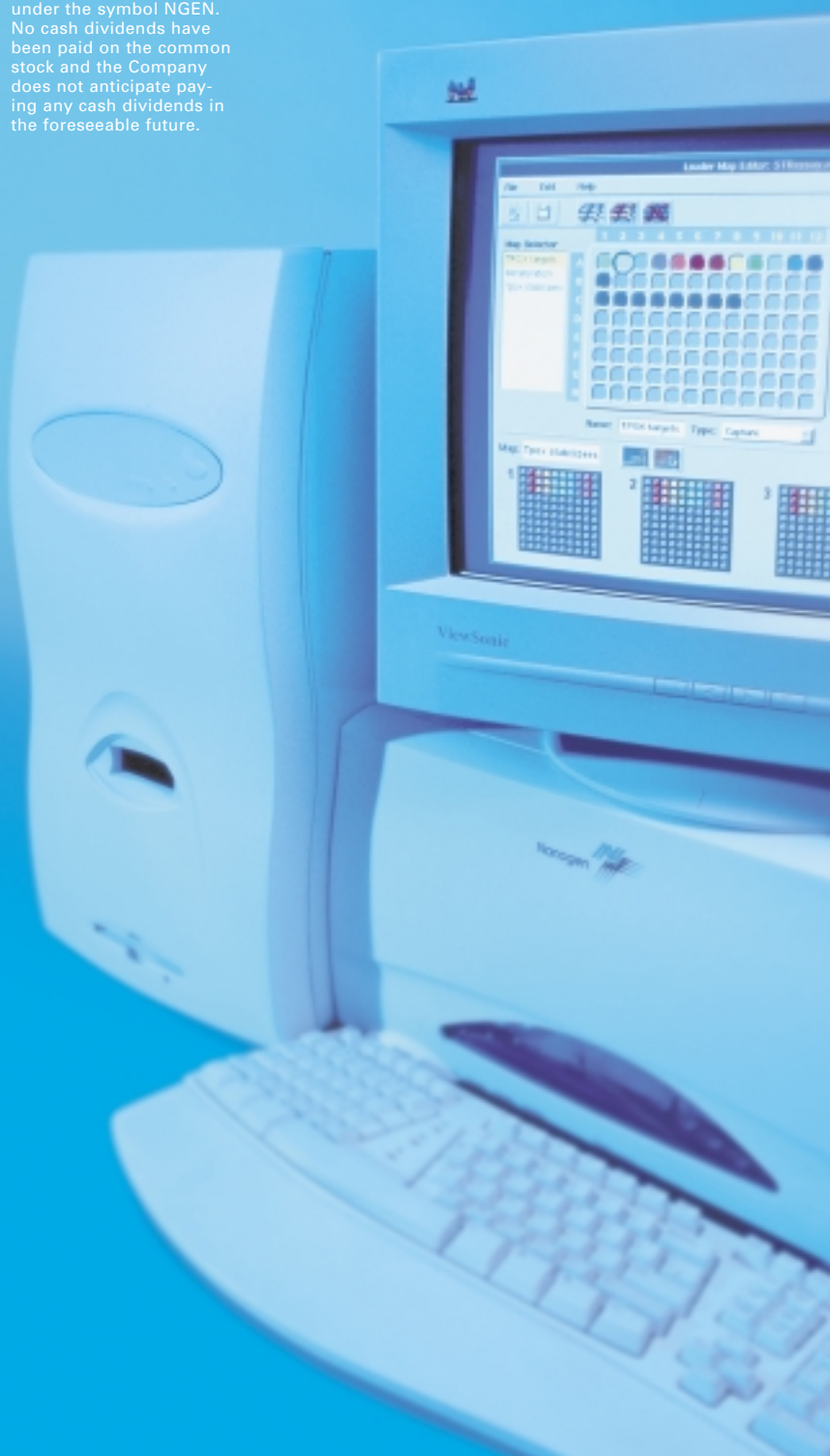
SEC Form 10-K
A Copy of the Company's annual report to the Securities and Exchange Commission on Form 10-K is available, without charge, upon written request to:
Investor Relations
Nanogen, Inc.
Phone: (858) 410-4600
Fax: (858) 410-4949
Email: www.investor@nanogen.com

Annual Meeting
The annual meeting of stockholders of Nanogen, Inc. will be held at 9:00am on Tuesday, June 6, 2000 at the Hilton La Jolla Torrey Pines, 10950 North Torrey Pines Road, La Jolla, California 92037. All stockholders are cordially invited to attend.

Market Information
The Company common stock trades on the NASDAQ National Market under the symbol NGEN. No cash dividends have been paid on the common stock and the Company does not anticipate paying any cash dividends in the foreseeable future.

Price Range of Common Stock

Year Ended December 31, 1998:	HIGH	LOW
2nd Quarter (from April 14, 1998)	$11.250	$ 5.385
3rd Quarter	$ 8.385	$ 3.000
4th Quarter	$ 5.750	$ 2.885
Year Ended December 31, 1999:		
1st Quarter	$ 9.635	$ 3.885
2nd Quarter	$ 9.750	$ 6.250
3rd Quarter	$ 8.635	$ 5.750
4th Quarter	$24.500	$ 6.500



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Editorial consultant: Michelle Bekey

Nanogen, Inc.
10398 Pacific Center Court
San Diego, California 92121
telephone: (858) 410-4600
website: www.nanogen.com